ARUMUGAM PILLAI SEETHAI AMMAL COLLEGE

(Re-accredited with B+ Grade by NAAC)

Tiruppattur – 630 211.

B.Sc. Physics Programme

Programme Outcome (POs) :

- Students will demonstrate an understanding of core knowledge in physics, including the major premises of classical mechanics, E&M and Modern Physics.
- Students will demonstrate written and oral communication skills in communicatingphysics-related topics.
- Students will design and conduct an experiment (or series of experiments) demonstrating their understanding of the scientific method and processes. Studentswill demonstrate an understanding of the analytical methods required to interpret and analyze results and draw conclusions as supported by their data.
- Students will demonstrate proficiency in the acquisition of data using a variety oflaboratory instruments and in the analysis and interpretation of such data.
- Students will utilize a wide range of printed and electronic resources and information technologies to support their research on physical systems and present those results in the context of the current understanding of physical phenomena.
- Students will demonstrate understanding of the applications of numerical techniques for modeling physical systems for which analytical methods are inappropriate or of limited utility.
- Students will demonstrate a thorough understanding of the analytical approach to modelling of physical phenomena.

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Tiruppattur – 630 211.

B.Sc. Physics Programme

Properties of Matter and Acoustics-7BPH1C1

Course Objectives

- This subject is useful in engineering applications.
- It gives details about physical properties of materials.

Course Outcome (COs)

- Understand the basic laws and concepts of dynamic bodies.
- Gain knowledge about the properties of materials.
- Understand the basic concepts of elasticity.
- Study the motion of viscous fluids by understanding Poiseuille's method.
- Provide an in-depth knowledge about gravitation, satellite and rocket propulsionsystem.
- Acquire the knowledge about properties of sound and ultrasonic.

Mechanics and Relativity - 7BPH1C2:

Course Description:

Mechanics and Relativity is the second core paper for a B.Sc., (Physics) student in the first semester. This core paper has four out of thirty credits in the first semester. This paper correlated two extremes. Objects moving with velocity much less than that of light are studied in the part of Mechanics whereas objects moving with velocity equal to light are examined in Relativity part of the syllabus. This syllabus will cater the basic requirements for their higher studies.

Course Objectives

- To make the students to have a firm grasp of the theories that form the basis of mechanics
- To enlighten the students about the forces that is responsible for an object to stay at rest(Statics) in air and in water medium (Hydrostatics).
- To enlighten the students about the forces that is responsible for an object to move(Dynamics) in air and in water medium (Hydrodynamics).
- To make the students to understand the role of Gravity in our life
- To make the students to understand the dynamics involved in a rigid body
- Relativity provides intellectual food for students interested in theoretical studies.

Course Outcome (COs)

- Have practical knowledge which helps the student in their everyday life.
- Have that required basic knowledge when the students opt for higher studies in Physics.

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Tiruppattur – 630 211.

B.Sc. Physics Programme

ANCILLARY MATHS-I -7BMAA1

Course Description:

Elementary techniques of integration, introduction to differential equations, applications to several mathematical models in the life and social sciences, partial derivatives, and some additional topics. One-semester review of manipulative algebra, introduction to functions, some topics in matrices, and that portion of trigonometry needed for calculus

Course Objectives

At the end of this course, students shall be able to Apply matrix operations to solve the relevant real life problems in Science subjects. Formulate a mathematical model for three dimensional objects and solve the concerning problems. Find area and volume based on a function with one or more variables

Course Outcome (COs)

Apply matrix operations to solve the relevant real life problems in science subjects. Formulate a mathematical model for three dimensional objects and solve the concerning problems. Find area and volume based on a functions with one or more variables.

General Physics Practical – I - 7BPH2P1

Course Description:

The foremost objective of this paper is to develop the scientific knowledge of the students by doing experiments. General physics practical – I is the practical paper for a B.Sc., Physics (Major) student in the first year. This paper has four credits. The external examination will be conducted at the end of first year. The students will be evaluated by an external examiner, who is appointed by the university, for 60 marks, and the internal examiner will evaluate the students for 40 marks. The syllabus is framed in such a way that the students can verify the theorems and laws, which he/she studied in the class room, by doing experiments.

Course Objectives

- To identify phenomena or object related to mechanics, properties of matter
- Learn facts/concept/relationship/theory/model related to mechanics, properties of matter

Course Outcome (COs)

- Have the ability to plan a scientific experiment •
- Have the ability to design a scientific experiment
- Have the ability to carry out a scientific experiment
- To interpret their findings in a scientific experiment

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Tiruppattur – 630 211.

B.Sc. Physics Programme

Thermal and Statistical Physics - 7BPH2C1

Course Description:

This course introduces the concept of heat, entropy, thermodynamical laws, production of low temperature, liquefaction of gases, transmission of heat and statistical methods.

Course Objectives

- Develops the understanding of mass, energy, heat, work, efficiency, ideal and real thermodynamic cycles and processes.
- Teaches first and second laws of thermodynamics, perfect gas law, properties of real gases, and the general energy equation for closed and open systems.
- It also exposes the production of Low temperature, superconductors and methods of liquefaction of gas.
- Explain various types of transmission of heat and the measurement of various constants related to it tools for the arrangement of microscopic particles.

Course Outcome (COs)

- Understand the concepts of heat,work and energy • Explain basic thermodynamic properties and units.
- Develop and apply the continuity equation for open and closed systems.
- Derive discuss the first law of thermodynamics.
- Understand the methods of production of very Low temperature
- Gather the knowledge about solar constant and its measurements.
- Know the different forms distribution of Sub atomic particles in the system using statistical methods.

Electricity, Magnetism and Electromagnetism - 7BPH2C2

Course Objectives

- To understand the basic concepts of Electric field and Electric Potential.
- To enrich their knowledge in thermo electricity and chemical effects on current.
- To learn and understand the magnetic field and magnetic properties of the matter.
- To familiarize with the laws of electromagnetic induction. 11
- To understand the concept of Maxwell‟s equation.
- To study and analyze the electromagnetic waves.
- To study the concept of poynting vector.

Course Outcome (COs)

- Gain knowledge of Gauss laws and solve the electric field for various geometric objects. Enable to understand the concept of electrical conductivity and Gibbs Helmholtz equation.
- Gain knowledge of seebeck effect, Peltier effect and Thomson effect.
- Enable to understand the concept of magnetic field.
- Thorough knowledge in the basic concept of electromagnetic induction.
- Able to derive the Maxwell‟s equation in free space and material media.

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B.Sc. Physics Programme

ANCILLARY MATHS-II - 7BMAA2

Course Description:

Elementary techniques of integration, introduction to differential equations, applications to several mathematical models in the life and social sciences, partial derivatives, and some additional topics. One-semester review of manipulative algebra, introduction to functions, some topics in matrices, and that portion of trigonometry needed for calculus.

Course Objectives

At the end of this course, students shall be able to Apply matrix operations to solve the relevant real life problems in Science subjects. Formulate a mathematical model for three dimensional objects and solve the concerning problems. Find area and volume based on a function with one or more variables

Course Outcome (COs)

Apply matrix operations to solve the relevant real life problems in science subjects. Formulate a mathematical model for three dimensional objects and solve the concerning problems. Find area and volume based on a functions with one or more variables

Optics and Spectrocopy - 7BPH3C1

Course Description:

With the introduction of this course, the students will understand the basic physics of optics and modern spectroscopy ideas

Course Objectives

- Students completing this course will understand geometrical optics, eyepieces and spectroscopic design.
- This course reveals the light properties such as interference, diffraction and polarisation.
- Last section of this course covers different spectroscopic ideas and their details.

Course Outcome (COs)

This course objective will give clear idea in geometrical optics, optical properties, optical instruments and spectroscopic applications to the students

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Tiruppattur – 630 211.

B.Sc. Physics Programme

GENERAL CHEMISTRY-I - 7BCHA1

Course Description:

This course gives an introduction to the basic concepts of Atomic structure and kinetics. Topics covered include Gaseous state, Solid state, colloids, Metallurgy and Chromatography

Course Objectives

- Principles of Physical Chemistry", B.R.Puri, L.R.Sharma and M.S.Pathania ϖ "Physical Chemistry", N.Kundu and SN.Jain
- To apply gas laws in various real life situations. ϖ To explain the behavior of real and ideal gas. ϖ To differentiate between gaseous state and vapour.
- To explain the types of emulsions. ϖ Explain the properties of liquids.
- To describe condition required for liquefaction of gases.
- To write the expressions for rate constant and entropy.
- To study the Hess‟s law and first law of thermodynamics.
- To understand various types of colloids and its applications

Course Outcome (COs)

Upon successful completion students should be able to:

- State and apply the laws of thermodynamics; perform calculations with ideal and real gases; design practical engines by using thermodynamic cycles; predict chemical equilibrium and spontaneity of reactions by using thermodynamic principles.
- To apply the concepts of colloids and gels
- To learn depth knowledge about liquid states

Course Description:

General Physics practical – II - 4BPH4P1

This course will help the students to introduce the fundamental knowledge about the experimental techniques. It provides sufficient background in devices, circuits employed in systems, which enable the students to design, build and test the equipment.

Course Objectives

- To calibrate low &high range voltmeter using potentiometer.
- To analyze the specific heat capacity of a liquid. •
- To determine the thermal conductivity by Lee‟s disc method.
- To determine the refractive index of the given solid &Biprism.
- To calculate the thickness of a thin wire by Air wedge method.
- To determine radius of curvature by Neuton‟s rings.

Course Outcome (COs)

Student should be able to,

- Understand the knowledge in electrical devices such as ammeter and voltmeter.
- Analyze the specific heat capacity, refractive index as per the standard procedure.
- Understand the standard values of each results.
- Study the emf, resistance behavior of the materials

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Tiruppattur – 630 211.

B.Sc. Physics Programme

Atomic and Nuclear Physics - 7BPH4C1

Course Description:

This subject satisfies the needs of the students on modern physics of atomic and nuclear ideas and their developments.

Course Objectives

- Students are revealed and can get good knowledge on positive rays and vector atom model.
- This course is very useful to understand X-ray ideas and crystallographic structure.
- The explanations are extended in radioactivity basics, nuclear fission and nuclear fusion, elementary particles and advanced quark model

Course Outcome (COs)

Students can attempt better insight by understanding this course and shall give clear idea in nano-technology in higher study

GENERAL CHEMISTRY-II - 7BCHA2

Course Objectives

- To understand the key features of coordination compounds, including:
  - the variety of structures.
  - oxidation numbers and electronic configurations.
  - coordination numbers.
  - ligands, chelates.
  - bonding, stability of complexes.
- To be able to use Crystal Field Theory to understand the magnetic properties (and in simple terms the colour) of coordination compounds.
- To be able to describe the shapes and structures of coordination complexes with coordination numbers ranging from 4 to 12.
- To be able to describe the stability of metal complexes by the use of formation constants and to calculate thermodynamic parameters from them.
- To be able to recognize the types of isomers in coordination compounds.

Course Outcome (COs)

- predicting geometries of simple molecules
- the fundamentals of the chemistry of the main group elements, and important real world applications of many of these species
- the use of group theory to recognize and assign symmetry characteristics to molecules and objects, and to predict the appearance of a molecule‟s vibrational spectra as a function of symmetry
- the bonding models, structures, reactivity‟s, and applications of coordination complexes

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B.Sc. Physics Programme

Analog Electronics - 7BPH5C1

This course introduces the characteristics and applications of semiconductor devices and circuits. Emphasis is placed on analysis, selection, biasing, and applications.

Course Objectives

- To give the idea about fundamental properties of semiconductors.
- To prepare students to perform the analysis of any Analog electronics circuit.
- To empower students to understand the design and working of diode rectifiers, Transistor amplifiers, oscillators.
- To prepare the students for get the knowledge about Operational Amplifier working as adder, subtractor, differentiators, integrator etc.,

Course Outcome (COs)

- Acquire basic knowledge of physical and electrical conducting properties of semiconductors.
- Develop the Ability to understand the design and working of Transistor amplifiers.
- Able to design amplifier circuits using Transistor and observe the amplitude and frequency responses of common amplifier circuits
- Observe the effect of negative feedback on different parameters of an Amplifier and different types of negative feedback topologies.
- Observe the effect of positive feedback and able to design and working of different Oscillators using Transistor.
- Develop the skill to build, and trouble shoot basic Analog circuits.

Computer programming in C – 7BPH5C2

Course Description:

Computer programming in C" is one of the major papers in the fifth semester for a B.Sc Physics student. The syllabus of Computer programming in C is applicable to those who have joined between 2017 and 2020 academic years and this core paper has four out of twenty two credits in the fifth semester. Few programs based on C are also included in the III year practical to test the students programming skills.

Course Objectives

- The objectives of the paper "Computer programming in C" for a B.Sc., Physics students are To make them familiar with understanding of code organization and functional hierarchical decomposition using complex data types.
- To enhance their structural and procedural programming skills

Course Outcome (COs)

After course completion the students will have the following learning outcomes

- Concept of thinking within the framework of C Program.
- To write a C program with characters, special characters, strings and numbers.

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B.Sc. Physics Programme

Mathematical Physics - 7BPHE1A

Course Objectives To enable the students to familiarize with vector concepts.

- To encourage the students to understand matrices and make use of them
- To be aware the partial and ordinary differential equation to solve physics problem.
- To enable students to get an exposure on basic of beta and gamma function.
- To give enough knowledge about complex variables and solve the physics oriented problems.

Course Outcome (COs)

- Familiarize with vector concepts.
- Ability to understand matrices and make use of them.
- Ability to understand homogeneous and non-homogeneous linear equation.
- Apply Fourier series and integrals to solve Physics problems.
- Familiarize with alpha and beta function.

NON-CONVENTIONAL ENERGY SOURCES - 7BPHE1B

Course Objectives

Make the students to

- Understand the various forms of conventional energy resources.
- Learn the present energy scenario and the need for energy conservation
- Explain the concept of various forms of renewable energy
- Outline division aspects and utilization of renewable energy sources for both domestics and industrial application
- Understand the process of conversion and storing the nonconventional energy.

Course Outcome (COs)

Upon completion of the course, the student will be able to:

- Identify energy demand and relate with available energy resources. Comparing the various conventional energy systems, their prospects and limitations.
- Know the need of renewable energy resources, historical and latest developments. 26
- Describe the use of solar energy and the various components used in the energy production with respect to applications like - heating, cooling, desalination, power generation, drying, cooking etc.
- Appreciate the need of Wind Energy and the various components used in energy generation and know the classifications.
- Understand the concept of Biomass energy resources and their classification, types of biogas Plants- applications

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Tiruppattur – 630 211.

B.Sc. Physics Programme

Course Description:

Elective Course I (C) Laser Physics and Fibre Optics - 7BPHE1C

Course Objectives

This course provides an introduction to Laser Physics, different types of lasers and output modulation methods.

- It discusses applications in industry, applications of holography
- The structure, fabrication and their types of optical fibre are explained.
- Learning principles of the key components used in optical telecommunications are provided.

Course Outcome (COs)

The course provides students with a working knowledge of laser physics and provides introduction into fibre optics. In addition it provides a good understanding of the critical laser parameters. Students will understand trends of development of modern lasers.

Elective II - A - Communication Electronics - 7BPHE2A

Course Description:

This course will help the students to introduce the fundamental principles of communication systems, AM , FM , and PM ,Demodulation , Amplitude and frequency shifting keying, satellite communication , network , basic fibre optic system. It provides sufficient background in theory, devices,circuits employed in systems, which enable the students to design, build and test the communication system

Course Objectives

- To explain the basic idea of communication system.
- To give a basic knowledge of principle and basic theory of modulationand demodulation .
- To explain the detailed theory of broad band communication, fibre optic communication.
- To analyze the networking system and their applications.

Course Outcome (COs)

Student should be able to,

- Understand the basic concepts ofcommunication system.
- Analyze the network
- Classify AM ,FM and PM 28
- Understand the basic concepts of optical fibres and their applications.

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B.Sc. Physics Programme

Elective Course II (B) – Numerical methods and Statistics - 7BPHE2B

Course Description:

The students are trained to meet the requirement for mathematics and programming ideas. This course will also be useful to the students appearing for mathematical competitive examinations.

Course Objectives

- Standard topics in numerical methods such as curve fitting, algebraic and transcendental equations.
- Simultaneous equations, numerical diffentiations and integrations are discussed.
- Correlation, Regressions and different distributions are included.

Course Outcome (COs)

The course which as gained immense speculation and has grown tremendously in dealing with numerical problems

Elective II – C - Solid State Physics - 7BPHE2C

Course Description:

The aim of this course will help the students to give the extended knowledge of the principles and techniques of solid state physics. This course covers the physical understanding of matter from an atomic view point. Fundamental theories in solid state physics are introduced to important application in current day technology and makes extensive use of examples.

Course Objectives

To give a broad knowledge in chosen discipline in its elective subjects.
To give a basic knowledge of force between atoms and bond structure of materials.
To describe physical behavior of solid and electronic devices.
To explain the detailed theory of semiconductors, dielectric and superconducting materials.
To discuss applications of electronic devices.

Course Outcome (COs)

Acquire the basic concepts of force between atoms and bonding between molecules.
Analyze the structural properties of elemental solids
Classify magnetic and superconducting behavior of solids
Understand the properties of semiconductors and the application of semiconductor devices.

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B.Sc. Physics Programme

ENTREPRENEUR DEVELOPMENT SKILLS - 7SBS5A3

Course Description:

This course has five units of syllabus which introduces the concept of Entrepreneurship, basic methods to select the business. It also includes the preparation of project skills, marketing skills, management of men, material and money and industrial management

Course Objectives

To understand the concept of Entrepreneur. 30
To expose business management idea.
To impart the knowledge of marketing skills ,management of men, material and money
To empower to become successful Entrepreneur.

Course Outcome (COs)

Upon completion of the course, the student will be able to develop understanding of:

- Entrepreneurship scenario in the country
- Attractions for and challenges of an entrepreneur
- Business generation idea
- The legal and regulatory environment
- Basic principle of economics and management
- Role of public and partnership

HERITAGE &TOURISM - 7SBS5A4

Course Description:

Culture and heritage are intricately connected to the appeal of tourist destinations. This course introduces the relationship between culture, heritage and contemporary tourism, exploring the phenomenon of cultural tourism. In this course, both positive and negative effects of global tourism on heritage destinations are mainly focused

Course Objectives

To introduce the concept and significanceof tourism.

- To Discuss the importance of Effects of Tourism –Social, Economic and Environmental aspects – Human Rights
- To understand Brief history ofthe heritage spots – The role of heritage spots in promoting tourism – UNESCO guidelines onHeritage 31
- To know the role of Guide and their skills.

Course Outcome (COs)

On successful completion of the course students will be able to:

- Demonstrate a critical understanding of the relationships between culture, heritage and tourism;
- Analyze the role that tourism plays in the production and consumption of culture;
- Evaluate both the positive and negative impacts of tourism on cultures and communities;
- Identify current issues in the development and management of cultural and heritage tourism products;

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B.Sc. Physics Programme

MARKETING AND SALES MANAGEMENT - 7SBS5A5

Course Objectives

- Discuss the sales, sales management and related concepts.
- Explain the structure and objectives of a sales organisation.

Course Outcome (COs)

Create a complete business plan for a start up business that you could actually take to a bank to secure financing

- Craft a retail store layout and merchandise plan 32
- Budget, schedule, and create an advertising campaign for a product or business
- Sell in multiple selling situations including to a real business buyer
- Work with an area business in a consulting role to create a marketing plan and promotion pieces
- Develop a territory plan for a business to business sales territory
- Job shadow with business to business sales reps
- Attend several business conferences
- ¬ Earn on the job experience with the company of your choice through an internship

General Physics Practical (III) - 7BPH6P1

Course Description:

This laboratory based course provides the"hands on" experience in a number of experimental techniques, and develops competence in the instrumentation typically used in Physics. The course assumes a familiarity with optics and electromagnetism, electricity and programming in computer.

Course Objectives

To determine the refractive index of the given small angle and biprism .
To find the Self- induction of a coil using the electrical brides.
To determine the Electro Chemical Equivalent of copper. of the mercury spectrum.
To determine capacitance of a capacitor by comparing the capacitances.
To write the C program for the different applications.

Course Outcome (COs)

- To understand theoretical principles of optics in the experimental method through the determination of refractive index of the prism using the spectrometer.
- To acquire the acknowledge in electrical devices such as ammeter voltmeter, millimeter and spot galvanometer etc.,
- To understand the process of electrolysis.
- To write the application programs in „C" "Language.

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Tiruppattur – 630 211.

B.Sc. Physics Programme

ELECTRONICS PRACTICAL - 7BPH6P2

Course Objectives

- To indentify the basic electronic devices like diode, transistor, led,ujt and scr.
- To observe the characteristics of diodes like PN, Zener diode.
- To Know diode as a rectifier and adding filters to see the ripple free output.
- To observe the characteristics of transistors, SCR & UJT.
- To analyze transistor amplifiers and their frequency responses.

Course Outcome (COs)

- Understand the diode and transistor characteristics.
- Verify the rectifier circuits using diodes and implement them using hardware.
- Design the biasing circuits like self biasing.
- Design various amplifiers like CE, CC, common source amplifiers and implement Them using hardware and also observe their frequency response

Elements of theoretical physics - 7BPH6C1

Course Description:

The course will help the students to expose the knowledge on the latest modern mechanics that is quantum mechanical concept from classical mechanics.

Course Objectives

- Students have been prepared to get ideas on classical mechanics by studying Lagragian theory.
- This course will enter into the quantum theory by studying dual nature of mater on De Broglie view.
- The detailed theory of Schrodinger equations and their applications are discussed.

Course Outcome (COs)

Students can easily understand the classical and quantum mechanical concepts and their applications. It gives proper entry for latest technologies.

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B.Sc. Physics Programme

DIGITAL ELECTRONICS - 7BPH6C2

Course Objectives

- To acquire the basic knowledge of digital logic levels and application of knowledge to understand digital electronics circuits.
- To prepare students to perform the analysis and design of various digital electronic circuits.

Course Outcome (COs)

- Understand the concepts of Binary codes.
- Understand the concepts of Boolean algebra. 35
- Gain knowledge about designing of arithmetic and logic circuits.
- understand the operation of basic digital electronic devices.

Project (7BPHEPR)

Course Objectives

- To enrich the knowledge about the electronic components.
- To acquire the thinking towards the amplifiers and oscillators.
- To facilitate the designs of PCBs.
- To equip the knowledge towards the nanoparticle synthesis, material formation mechanism, characterization of as prepared nano materials.
- To give the innovative ideas of material design using simple principles.
- To enable the use of basic literatures and practice them to write the draft of the assigned work.

Course Outcome (COs)

- Thorough knowledge to design the desired electronic circuits.
- Understand the concept related ideas & design the equipment.
- Able to understand the nano concept, according to our facility, design the nano materials.

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B.Sc. Physics Programme

Elective Course III (A) – Microprocessors - 7BPHE3A

Course Description:

The course is intended for introductory microprocessor in technology and engineering. It is a comprehensive treatment of the microprocessor covering both hardware and software based on the 8085 microprocessor family.

Course Objectives

- To understand 8-bit microprocessor concept with machine control and process control.
- To write assembly language program for 8085 microprocessor
- It includes various data transfer between microprocessor and peripherals such as interrupts, interfacing and data converters.

Course Outcome (COs)

The course, microprocessor technology is an exciting, challenging and growing field which masters the students in programming techniques, interfacing and design.

Computer programming in C++ - 7BPHE3B

Course Description:

"Computer programming in C++" is elective paper for an III B.Sc., Physics student in his sixth semester. This paper has five out of twenty nine credits in the sixth semester. This course is a continuation of the core paper "Computer programming in C" in the fifth semester.

Course Objectives

The objectives of the paper "Computer programming in C++" for a B.Sc., Physics students are

- To make familiar with the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects.
- To understand dynamic memory management techniques using concepts like pointers, constructors, destructors.
- To make familiar with concepts like functions and polymorphism.
- Demonstrate the use of various OOPs concepts with the help of programs

Course Outcome (COs)

After course completion the students will have the following learning outcomes

- Concept of thinking within the framework of C++ Program.
- Able to write C++ program using concepts like classes, member functions, stream I/O, inheritance, pointers, arrays, linked lists.
- To overcome the errors during program execution.

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B.Sc. Physics Programme

Elective III - C – Fundamentals Of Nano Science - 7BPHE3C

Course Description:

This course designed to expose students to the new and rapidly emerging field of nanomaterials and establish a basic understanding of the underlying scientific basis for the behavior of nanomaterials.

Course Objectives

- To prepare the students for get the knowledge about basic ideas of nanomaterials.
- To give an introduction of CNT and analyze properties and their application.
- To explain the detailed theory of fabrication, characterization of SEM,TEM,AFM.
- To manipulate and fabricateNano devices.

Course Outcome (COs)

- Understand the basic concepts ofnanomaterials.
- Analyze the unique properties associated with nanomaterials
- Familiar with the development of the field of nanoscience.
- Understand the basic concepts of CNT and their applications.
- Familiar with the instrumentation and technologies, currently utilized to manipulate and fabricate a variety of nanomaterials

BASIC INTERNET AND OFFICE AUTOMATION LAB - 7SBS6B3

Course Description:

"Basic internet and office automation lab" is a skill based paper for an III B.Sc., Physics student in his sixth semester. This paper has two out of twenty nine credits in the sixth semester. The syllabus is framed in such a way that all students irrespective of their discipline should be well versed in communicating and drafting various kinds of document using computers

Course Objectives

To realize the power of electronic media through internet,

- To enable the students in crafting professional word documents, excel spread sheets, power point presentations using the Microsoft suite of office tools.
- To familiarize the students in preparation of documents and presentations with office automation tools.

Course Outcome (COs)

To perform documentation

- To communicate with the help of internet
- To perform accounting operations
- To perform presentation skills

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Tiruppattur – 630 211.

B.Sc. Physics Programme

Fruits,vegetables preservation skills - 7SBS6B4

Course Objectives

principles, technologies and processes used in the processing, preservation, extension of shelf life and value addition of fruits and vegetables.

- To furnish and acquaint a student with knowledge and understanding of the basic biological, chemical and physical properties of fruits and vegetables and their contribution to human nutrition and diet
- To furnish and acquaint a student with knowledge and understanding of the basic postharvest biological, chemical, physiological and metabolic processes and changes in fruits and vegetables and how these can be controlled to prevent or reduce deterioration and loss of nutritional quality and value in fruits and vegetables production and processing.

Course Outcome (COs)

Students completing the course will be able to:

• Understand the concept of basic biological, chemical, physical properties of fruits and vegetables.

• The importance of vegetables and fruits in human nutrition diet.

• Acquire the knowledge of importance of processing and methods of processing for the fruits and vegetables.

• Understand the importance of properties of container

EQUIPMENT HANDLING SKILLS FOR EVENTS - 7SBS6B5

Course Objectives

- To impart the characteristics of various types of electrical and electronic equipments used in events
- To learn about the working, handling and troubleshooting skills on various electrical and electronic gadgets

Course Outcome (COs)

- Hands on training to handle the mike, speakers and LCD projectors etc., 40
- Able to attend the trouble shooting on electronic gadgets.
- Familiarize the working principle of mike, speaker and amplifier.
- Acquire the knowledge to handle the video camera.
- Able to edit the picture which was taken by the camera, using software.