



*Ready for
Every Good Work*

SACRED HEART COLLEGE (AUTONOMOUS)

Tirupattur – 635 601, Tamil Nadu, S.India

Resi : (04179) 220103

College : (04179) 220553

Fax : (04179) 226423

A Don Bosco Institution of Higher Education, Founded in 1951 * Affiliated to Thiruvalluvar University, Vellore * Autonomous since 1987

Accredited by NAAC (4th Cycle – under RAF) with CGPA of 3.31 / 4 at 'A+' Grade

Name of the Programme: B. Sc Physics

S. No	Title of the Paper	Course Code	Course Objectives	Course Outcomes	Relevance
1	SUBJECT ELECTIVE - I: RENEWABLE ENERGY AND ENERGY HARVESTING	P538C	<ul style="list-style-type: none"> • To make the students to understand the importance of fossil fuels, conventional energy resources. • To provide a complete idea of basic components of a typical solar collectors and its applications in the solar energy absorption equipment's. • To make the students to analyze the dissimilarity between Horizontal axis and vertical axis WECS. • To enable the students to comprehend the concept behind various energy sources including biomass, tidal energy and hydrogen energy. • To give a basic knowledge about various methods of energy harnessing, storage systems and distribution. 	<p>On successful completion of the course, the students will be able to</p> <ul style="list-style-type: none"> • Explain the basic ideas on commercial and non-conventional energy resources and illustrate their availability. • Explain the construction and designing of solar collectors and its implementation in the solar energy equipments. • Demonstrate the variance in the operation of vertical axis and horizontal axis WECS and its installation towards power production. • Infer the knowledge on various energy sources including ocean, tidal and biomass conversion technologies. • Realize the need of energy harvesting and describe the methods of storage systems to achieve the sustainability in the energy sector. 	<p>Regional, National, Global developmental needs</p>

2	ASTROPHYSICS	P720C	<ul style="list-style-type: none"> • To introduce the students to universe and its evaluation. • To impart knowledge on galaxies and its types. • To understand the basic structure and properties of milky way galaxy. • To provide an overview of solar system. • To learn methods of estimating astronomical distances and temperature and radius of stars 	<p>On successful completion of the course, the students will be able to</p> <ul style="list-style-type: none"> • Understand and explain the origin of Universe and predict the present age of the universe. • Describe the classification of galaxies. • Acquire basic knowledge of milky way galaxy and its properties. • Explain the Solar system and its origin. • Estimate astronomical distances and temperature and radius of stars. 	Regional , National , Global developmental needs
3	APPLIED ELECTRONICS	P631	<ul style="list-style-type: none"> • To learn about basic logic gates, DeMorgan's theorems, Simplification of Boolean expressions and implementation of logic circuits using NAND-NAND logic. • To learn design, working and truth table of combinational circuits. To study about different logic families and flip flops. 	<p>On successful completion of the course, the students will be able to</p> <ul style="list-style-type: none"> • Simplify Boolean expressions using K-map and design NAND-NAND logic circuits. • Construct arithmetic circuits and explain their operation. <p>Compare different logic families and explain the working of various flip flops.</p>	Regional, National, Global developmental needs