



NOTIFICATION

It is hereby notified that the Advanced Studies & Research Board (ASRB) vide its Resolution No. ASRB-(Cir)-2025-46 has approved the one new elective course entitled "PH-602 Advanced Environmental Physics" for Ph.D Programme to be offered at Department of Physics, applicable from Fall-2025, as under:

PH-602 Advanced Environmental Physics

Radiative Physics and Spectroscopy:

Solar radiation and greenhouse effect, Black body radiation and Stefan-Boltzmann law, Light matter interaction, Einstein coefficients, UV light and bio-molecular damage,

Thermodynamics and Energy System:

First and Second Law of Thermodynamics, Heat engines and Carnot cycle, Energy transfer and storage, Pollution from Thermal system

Renewable Energy and Bio-Photonic System:

Solar, wind, hydro and bio-energy Physics, Physics of photosynthesis and energy conversion, Organic photocells and Grätzel cells (A dye sensitized solar cell), Bio-solar energy concepts

Nuclear and Radiation Physics:

Principles of nuclear fusion and fission, Radiation sources and their environmental impact, Health Hazard and radiation safety, nuclear fuel cycle and waste management

Environmental Fluid Dynamics and Pollutant Dispersion:

Mathematics of fluid flow: Navier-Stokes basics, Dispersion in rivers, lakes and aquifers, Gaussian plumes and turbulent jets, Monitoring pollution with remote sensing and optical tools

REGISTRAR

To,

Secretary, ASRB

Copy to:-

- 1- Dean (ASC)
- 2- Chairperson, Department of Physics
- 3- Controller of Examinations

Copy for information to:-

- 1- PS to Vice Chancellor
- 2- PA to Pro-Vice Chancellor
- 3- Director QEC/MR ISO 9000