



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-601 Environmental Modeling System" for Ph.D Programme to be offered at Department of Physics, applicable from Fall-2025, as under:

PH-601 Environmental Modeling System

Fundamentals of Environmental System:

Overview of Environmental Systems and components (air, water, soil), Types of environmental pollution and techniques, Modeling principles: dynamic system, feedback and steady state behavior

Mathematical and Computational Modeling:

Difference equation and system dynamics, Model structure, formulation and validation, Use of modeling software like MATLAB Simulink, STELLA, VENSIM & etc.

Model Development and Classification:

Types of models (deterministic, stochastic, empirical, mechanistic), System diagrams and mathematical relationships, Model calibration, verification and validation

Air Pollution Modelling:

Modeling mobile source, air pollution invention, Role of mobile sources in urban air quality, Cohort models and Gaussian plume model

Surface and Groundwater Modeling:

Coupling models across environmental domain, GIS and remote sensing in model development, Uncertainty analysis and scenario development

Integrating Environmental Modeling:

Coupling models across environmental domain, GIS and remote sensing in model development, Uncertainty analysis and scenario


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