

Department of Environmental Science

University of Kalyani

Syllabus for

Ph. D. Course Work (One Semester)

Paper	Name of Paper	Marks	Credits
Paper – I	Literature Review	50 (40+10*)	2
Paper – II	Research Methodology	100 (80+20*)	4
Paper - III	Subject Upgradation	50 (40+10*)	2
	Total	200 (160+40*)	8

* Indicated Internal Assessment Marks

Paper – I: Literature review

Each student will prepare a review of literature in their respective field.

Paper – II: Research Methodology

Integrated Research Approaches: Research Process - Concepts and theories to solve and understand scientific problems, Design of research work, Data collection and data generation, Citation Methods and Styles, Writing of Research Grant proposals as per format of UGC/CSIR/DST/ or any National/State funding agency.

Demonstration of Instruments and Introduction of Spatial Technology

Spectrophotometer, Spectrofluorimeter, Atomic Absorption Spectrophotometer, Flame photometer, Electrophoresis, Gel Doc, Ultracentrifuge, ELISA reader, Probe sonicator, Fluorescence microscopy, GM counter, Pyranometer, Sunphotometer, Lightning Sensor, Trapping of Air Microbes.

Access to Remote Sensing and GIS facilities.

Computer Applications: Data processing by using different software for scientific information.

Paper – III: Subject Upgradation

Development on the subject by presenting two papers on recent work in their respective field.

Examination Procedure

Paper – I: Literature review

Write up (about 3000 words) **25 marks**

Presentation and Interaction **15 marks**

Internal Assessment **10 marks**

Total 50 marks

Paper – II: Research Methodology

Synopsis and Design of Work Plan **15 marks**

Research Grant Proposal **15 marks**

Proposal Presentation (Oral) **10 marks**

Laboratory Book
(Assessment through Viva voce) **20 marks**

Continuous Assessment for
Computer applications **20 marks**

Internal Assessment **20 marks**

Total 100 marks

Paper – III: Subject Upgradation

Write up of Presentation (two) **10 marks**

Presentation of Seminar Paper I (Oral) **20 marks**

Presentation of Seminar Paper II (Poster) **20 marks**

Total 50 marks