



**Barsat Govt College**  
**Department of Chemistry**  
**offers**



**VALUE ADDED COURSE ON**  
**WATER POLLUTION AND**  
**ANALYSIS**  
**SESSION 2022-23**

**Course Offers:**

**35 contact hours**

**Certificate on completion**

**Hands on training**

**7th- 13th JUNE, 2023**

**[chemistry@bgc.ac.in](mailto:chemistry@bgc.ac.in)**

Barasat Government College  
Department of Chemistry  
Session 2022-23

**Value added course**  
**WATER POLLUTION AND ANALYSIS**

**Course Objective:**

To impart job oriented skill through hands on experience of water testing and quality assessment.

**Course Content:**

**Day 1:** Theoretical classes on water resources, water cycles, causes of water pollution and related health hazards and theoretical principles of water analysis.

**Day 2:** Collection of water from different sources

**Day 3:** Theoretical classes on principle of measurement of total hardness and its removal, and measurement of pH of water.

Laboratory classes on water testing for (a) Hardness of water (b) total nitrogen content of water (Nitrates, nitrites and ammonium content) (b) Measurement of pH

**Day 4:** Theoretical classes on the principle of testing Arsenic content of water and its related health hazard

Laboratory classes on measurement of (a) arsenic content of water (b) BOD and Dissolved oxygen of water.

**Day 5:** Assessment of students through viva and written tests.

**Course Outcome:**

At the completion of the course the students should be:

(a) Aware of the various pollutants that can contaminate ground and surface water and their related health hazards

(b) Able to analyze chemical pollutants of water

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**Programme Schedule**

Date	Time	Topic	Resource Person
Day 1 (7.06.2023)	10am-11am	Inauguration and Overview of the Programme	<b>Dr. Samar Chattopadhyay (Principal)</b> Dr. Prabir Kumar Bhattacharyya (Head of the Department) and Dr. Arup Bandyopadhyay
	11am -12.30pm	Water resources , Global crisis, water cycle, complexation in natural and waste water	Dr. Prabir Bhattacharyya
	12.30pm -2.30pm	Different sources of water pollution and related health hazards	Dr. Soma Nath Deoghoria
	2.30pm-3 pm	Recess	
	3-5pm	Methods of removing pollutants from water	Dr. Suparna Basu Chaki

Date	Time	Topic	Resource Person
Day 2 (8.06.2023)	10am-2pm	Collection of water samples	Dr. Narayan Chandra Bhar
	2pm –2.30 pm	Recess	
	2.30pm-5pm	Collection of water samples	Dr. Prabir Kumar Bhattacharyya

Date	Time	Topic	Resource Person
Day 3 (9.06.2023)	10am-12noon	Discussion on concept of pH and acidity of water	Dr. Arup Bandyopadhyay and Dr. Samrajnee Dutta
	12am -1pm	Measurement of water pH	Dr. Arup Bandyopadhyay and Dr. Samrajnee Dutta
	1pm -2.30pm	Discussion and Measurement of Hardness of water	Dr. Soma NathDeoghoria
	2.30-3pm	Recess	
	3pm-5pm	Discussion and measurement of nitrogen content of water	Dr. Jibanananda Jana

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Date	Time	Topic	Resource Person
Day 4 (12.06.2023)	10am-12.30pm	Discussion and measurement of arsenic content of water	Dr. Jibanananda Jana
	12.30am -2pm	Discussion and measurement of BOD and COD of water	Dr. Ambarish Ray
	2pm-2.30	Recess	
	2.30pm-5pm	Discussion and measurement of DO of water	Dr. Suparna Basu Chaki

Date	Time	Topic	Resource Person
Day 5 (13.06.2023)	10am-12o'c lock	Hazard of As in ground water in West Bengal	Dr. Prabir Kumar Bhattacharyya
	12 o'clock -1pm	MCQ Test	Dr. Prabir Kumar Bhattacharyya
	1pm -2.30pm	Viva	and Dr. Arup Bandyopadhyay
	2.30 pm -3 pm	Recess	
	3pm-5pm	Valedictory Session and Distribution of Certificates	<b>Dr. Samar Chattopadhyay (Principal)</b> Dr. Prabir Kumar Bhattacharyya (Head of the Department) and Dr. Arup Bandyopadhyay

**Course Coordinator: Dr. Prabir Kumar Bhattacharyya**