

ST. XAVIER'S COLLEGE (AUTONOMOUS), KOLKATA

MULTIDISCIPLINARY COURSE ON

WETLAND ECOLOGY, BIODIVERSITY AND CONSERVATION

Wetlands cover less than 1% of the Earth's surface but hold the most biodiversity on the planet and have allowed human civilizations to flourish. Tragically, we have lost more than 70% of our wetlands since the 1900s with catastrophic impact on humanity and the countless species that depend on them. But there is still time to take action to conserve wetlands.

This course will provide students a strong foundation in basic wetland science, wetland conservation challenges and how specific laws help us conserve wetlands. The course will also train students to become passionate conservation communicators, and can even provide the first step towards pursuing specialised courses or higher degrees in wetland science and conservation practice.

SEMESTER	TWO
PAPER CODE	M1WC240211P
PAPER TITLE	WETLAND ECOLOGY AND CONSERVATION
NO OF CREDITS	3
THEORY/ PRACTICAL	THEORY
NO OF PERIODS PER WEEK	THREE
MINIMUM NO. OF PREPARATORY HOURS PER WEEK BY STUDENTS	4
PROFESSORS	
COURSE OBJECTIVES	a) Establish a strong foundation in basic wetland science b) Learn about wetland conservation challenges and the Indian legal infrastructure to conserve and protect wetlands c) Develop an empathetic connection to wetlands and become passionate conservation communicators
COURSE OUTCOMES	This foundational course will equip and enable students to apply for specialized courses or higher degrees on the subject. Students will also interact and network with conservation practitioners, which will provide them with possible opportunities to intern and gain field experience. Additionally, the course will focus on building empathy for the subject and ensure that students' communication and advocacy skills will be developed and enhanced so that they can work more

	effectively for wetland preservation and engage in informed conservation efforts.	
SYLLABUS TOPICS WITH INSTRUCTOR NAME AND NO. OF PERIODS ASSIGNED	Topics	Instructor's Name (Mode: online/ offline)
	Freshwater ecosystems - 1	Dr Ian Harrison & Tiasa Adhya (online and offline)
	What are wetlands and types of wetlands - 1	Tiasa Adhya (offline)
	Water drives everything in wetlands - 1	Tiasa Adhya (offline)
	What are flood pulses and why are they a wetland's life force - 1	Tiasa Adhya (offline)
	What is special about wetland soil - 1	Tiasa Adhya (offline)
	What is special about wetland plants - 1	Tiasa Adhya (offline)
	How is biodiversity adapted to wetlands - 1	Tiasa Adhya (offline)
	Special session on Fishing Cat, a wetland cat and West Bengal's state animal - 1	Tiasa Adhya (offline)
	Zonation in wetlands - 1	Tiasa Adhya (offline)
	Causal factor framework for studying wetlands - 2	Tiasa Adhya (offline)
	Wetland biogeochemistry - 2	Tiasa Adhya (offline)
	Understanding mangrove ecosystems - 1	Dr Sugata Hazra (offline)
	Indian Sundarbans and blue carbon - 2	Dr Avra Chakraborty (could be either online or offline)
	Ecological functions of wetlands - 2	Dr Max Finlayson (online)
	Mid-term presentations - 2	
	CONSERVATION	
	Threats to wetlands - 2	Tiasa Adhya (online)
Why are dams a problem for wetland biodiversity - case study on Gharials - 1	Tarun Nair (online)	

	Laws in India that help protect wetlands - 3	Ritwick Dutta (could be either online or offline)
	COMMUNICATION	
	Be a good science communicator - 2	Dr Arjun Srivathsa (offline)
	Develop empathetic connection to wetlands through dance - a workshop - 1	Priya Ranganathan (offline)
	Storytelling in conservation and communication - 1	Ashwika Kapur (offline)
	<i>How to present and speak well – online module to be handed over to students</i>	
READINGS	Will be provided in due course	
EVALUATION	Continuous mode including group and individual projects, submissions, quiz = 48 marks Attendance mark = 2	