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Search for: * [Home](#) * [About Research](#) * [Message from Head of Department](#) * [Major Divisions](#) * [Mission, Vision & PEO](#) * [Strength of CE, UIU](#) * [Program Research](#) * [Undergraduate](#) * [Course Sequence](#) * [Course System](#) * [Degree Requirement](#) * [Registration and Payment System](#) * [Course Drop and Withdrawal](#) * [Scholarship](#) * [Tuition Fees](#) * [Admission](#) * [Research Research](#) * [Field of Interest](#) * [Faculty Members](#) * [Facilities Research](#) * [Lab Facilities](#) * [Class Room and Study Room Facilities](#) * [IT Service](#) * [Library](#) * [Resources Research](#) * [Academic Calendar](#) * [Curriculum](#) * [Forms](#) * [Testing & Consultancy Research](#) * [Testing facilities](#) * [Application form](#) * [Activities](#) * [Notices](#) * [Contact](#)

Dr. Rumana Afrin

Associate Professor, Department of Civil Engineering & Head of Dept.

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- [Education](#)
- [Research Interest](#)
- [Experience](#)
- [Courses Taken](#)

Education

Ph.D. (Env), Bangladesh University of Engineering and Technology (BUET) **M.Sc. Engg. (Env)**, Bangladesh University of Engineering and Technology (BUET), 2008 **B.Sc. Engg. (Civil)**, Bangladesh University of Engineering and Technology (BUET), 2003

Research Interest

Research Interest Areas: * [Wetland](#) * [Municipal Waste management](#) * [Water quality](#) * [E-Waste management](#) * [Ground water](#)

Undergraduate Thesis Supervision * A Study on Current Scenario of Groundwater Level of Some Selected Area of Dhaka City. * A Comprehensive Study on Ambient Air Pollution in Three Specific Districts of Bangladesh and Its Health Impact on Human life. * A Microscale Study on The Effect of Urban Heat island in Dhaka: Cause, Impact and Mitigation. * A Study to Design an Activated Sludge System for High Strength Wastewater. * Comparative analysis of pyrolysis yields and distillation of liquid yielded from different solid waste. * A Comparative Study on Impurities removal efficiency of Hatirjheel lake using selected media in Horizontal Constructed Wetland. * A Study on Rainwater Harvesting: An alternative source of water for domestic use. * Nitrogen Removal by Activated Sludge Process for treating High Strength Wastewater. * A Comprehensive study on environmental impact and Health effect due to Tannery wastes in Hazaribagh Canal. * A Comparative Cost Analysis of Trenchless versus Traditional Open Trenching System for the Water Pipeline Construction. * Assessment of Phosphorus removal performance from Municipal wastewater in Vertical and Horizontal Constructed wetland systems when arranged in Series. * A Study on the Influence of Different Unconventional Media in Horizontal Constructed Wetlands for Enhancing the Removal of Ammonia from Municipal Wastewater. * Impacts of Noise Pollution on the Residents Quality of life in Dhaka City. * Investigation of industrial waste management of Tejgaon I/A Dhaka. * A comprehensive study on present condition of water supply in different zones of Dhaka city. * Assessment of drinking water quality and sanitary system in flood shelter near Dhaka city. * A study on the current solid waste management system that practices in Dhaka north city corporation area. * Anaerobic digestion of municipal sewage sludge with different substrates. * A study on environmental impact and health effect due to brick Kiln in different zones of Dhaka city. * Condition of basic services-water supply, sanitation and waste management in slums of Chittagong city. * Study on Building Sanitation Situation in Urban Center. * Observation of water loss of a water distribution network under Dhaka WASA in DMA 504 (Gulshan-2). * Analysis of District Metered Area DMA 808 (Kalachanpur, Nadda, Kuril) based on water tightness test. * A Comparative Study on Impurities Removal Efficiency of Hatirjheel lake using Selected media by Floating Constructed Wetland. * A comprehensive study of health Risks due to Vehicular pollution in Dhaka city. * Comparative Study of Pollutant Removal Efficiency between Horizontal Flow and Vertical flow Wetland System using Stone Chips Media for Municipal Wastewater. * Study on spatial variations of the air pollutants over the period in some specific areas of

Bangladesh. * Assessment of Organic Nitrogen removal performance from Municipal wastewater in Vertical and Horizontal Constructed wetland systems when arranged in Series.

Experience

Assistant Professor(January 2020 – Present), Department of Civil Engineering,**United International University**, Dhaka, Bangladesh. **Assistant Professor**(April 2008 – December 2019), Department of Civil Engineering, **Ahsanullah University of Science and Technology**, Dhaka, Bangladesh. **Lecturer**(October 2004 – March 2008), Department of Civil Engineering,**Ahsanullah University of Science and Technology**, Dhaka, Bangladesh. **Lecturer**(May 2003 – October 2004), Department of Civil Engineering, **Stamford University**, Dhaka, Bangladesh.

Courses Taken

Undergraduate Courses: * Theroretical Courses * Engineering Mechanics * Surveying * Fluid Mechanics * Water Supply Engineering * Wastewater and Sanitary Engineering * Solid and Hazardous Waste Management * Building Sciences & Services-II, Plumbing * Practical courses * Civil Engineering Drawing * Computer Aided Drafting * Environmental Engineering laboratory * Water Resources Engg Sessional–II

Postgraduate Courses: Theory of Water treatment Theory of Sewage Treatment Municipal and Rural Sanitation Water Pollution and its Control Water Supply Engineering and Design Environmental Sanitation

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- Why UIU
- Vision Mission Goals
- General Information
- UIU Campus
- Guiding Principles
- Ranking & Accreditation
- Convocation
- Gallery
- Media
- Career
- Contact

Departments

- Dept. of CSE
- B.Sc in Data Science
- Dept. of EEE
- Dept. of Civil Engineering
- Dept. of Pharmacy
- Dept. of English
- Dept. of EDS
- Dept. of MSJ
- SoBE (BBA, AIS, MBA, EMBA)
- Dept. of Economics
- Dept. of BGE

Admission

- Admission
- Tuition Fees & Waiver
- Admission Requirements
- Admission Test Result
- Admission Procedure

- [Admission Dates](#)
- [International Studentsâ€™ Admission](#)
- [Global Opportunities](#)
- [International Collaboration](#)
- [FAQ](#)

Important Links

- [Time Schedule of Shuttle Services](#)
- [Student Transportation Service](#)
- [Payment Procedure](#)
- [Student e-Resources](#)
- [Important Contact](#)

Quick Links

- [UCAM](#)
- [eLMS](#)
- [Parent Portal](#)
- [Online Classroom Booking](#)
- [Degree Verification](#)
- [Necessary Forms](#)
- [Notice](#)
- [News](#)
- [Event](#)
- [CE Old Website](#)

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