### DEPARTMENT OF SOIL AND WATER CONSERVATION ENGINEERING

(Mahamaya College of Agricultural Engineering & Technology Akbarpur AmbedkarNagar) ACHARYA NARENDRA DEVA UNIVERSITY OF AGRICULTURE & TECHNOLOGY KUMARGANJ, AYODHYA - 224229, UTTAR PRADESH

### Overview:

The department of Soil and Water Conservation Engineering was established in the college in the year 2003. The M.Tech (SWCE) degree programme in agricultural engineering commenced from the session: 2012-13. The department offers courses in Soil and Water Conservation Engineering for under-graduate and post-graduate students Of Mahamaya College of Agricultural Engineering & Technology.

### Vision/Objective:

The vision of the department is to become a premier and recognized Centre of excellence in teaching and research. The faculties of the department are actively engaged in providing quality education to the students for transforming their lives, and making them future professionals and academicians.

#### **Mandates:**

- > To impart core and conceptual knowledge of soil and water conservation to the students.
- > To inculcate scientific and innovative thinking in the students.
- > To equip the students with various equipment for practical, and enhancing their practical skills.
- > To provide the different aspects of soil and water conservation engineering.
- > To provide global recognition to the post-graduate students through innovative research
- > To have inter disciplinary knowledge, professional competence and personal traits of value to industries.

### **Faculty**

S. No.	Name of Faculty	Designation
1.	Er. R. J. Singh	Associate Professor cum Head
2.	Dr. Vikas Kumar Singh	Asstt. Professor

# **Facilities and Infrastructure:**

# **Classrooms and Laboratories**

# **Equipments:**

### **List of Instruments**

S. NO.	INSTRUMENT	PURPOSE
1.	Float Type Recording Rain Gauge	To measure the precipitating rain in a given amount of time per unit area.
2.	Automatic Water Level Recorder	Designed for application requiring unattended, long-term monitoring of water level.
3.	Hot Air Oven	To sterilize the product.
4.	Sun Shine Recorder	To measure sunshine duration.
5.	Anemometer	To measure wind speed.
6.	Parshall Flumes	To measure the flow of water in an open channel or non-pressurized pipe.
7.	USWB Class-A Pan Evaporimeter	To measure evaporation from free water surface.
8.	Double Ring Infiltrometer	To determine the rate of infiltration of water into the soil.
9.	Sieve Shaker	To determine the percentage of each size of grain that is contained within a soil sample.
10.	Concrete Slump Test	Measures the consistency of fresh concrete before it sets.
11.	Constant Head Permeameter	To determine the permeability of granular soils like sands and gravels containing little or no silt.
12.	Crushing Strength Apparatus	Provides relative measure of the resistance of an aggregate to crushing under a gradually applied compressive load.
13.	Bulk Density Core Cutter Apparatus	To determine the in-situ dry density of soil.
14.	Manual Post Hole Digger	To create an initial hole or deep hole to grow a plant or to install fence around agricultural field.

### Models available in SWCE Lab

- 1. Gravity Dam
- 3. Coffer Dam
- 5. Canal Regulator
- 7. River Head Work
- 9. Safe Water Supply from a Pond
- 11. Visvesvaraya Gate
- 13. Canal Drop
- 15. Level Crossing
- 17. Canal Intake
- 19. Supressed Weir
- 21. Silt Ejector
- 23. Gibb's Module
- 25. Tank Sluice with Plug and Cistern
- 27. Saddle Syphon Spillway
- 29. Aqueduct
- 31. Deep Well

- 2. Spillway Gate
- 4. Tank Weir
- 6. Volute Syphon Spillway
- 8. Fish Ladder
- 10. Deep Tube Well
- 12. Sluice Gate
- 14. Syphon Aqueduct
- 16. Super Passage
- 18. Step Well
- 20. Under Ground Sever
- 22. Sever Treatment Plant
- 24. Volute Syphon
- 26. Drainage System
- 28. Septic Tank
- 30. Rapid Sand Filter





