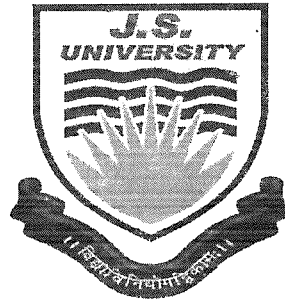


J.S. University, Shikohabad

Established by UP Govt. Act No. 07 of 2015


Recognized by U.G.C. under section 2 (f) of Act-1956



VALUE ADDED COURSE

Soil and Water Conservation Engineering: Techniques for Sustainable Land Management

Faculty of Agricultural Sciences

	J.S. University, Shikohabad Faculty of Agricultural Sciences	Value Added Course
		AGVAC-09

Soil Conservation and Management: Best Practices for Sustainable Agriculture


Learning Objectives:

This value-added course on Soil Conservation and Management is designed to provide participants with a comprehensive understanding of the principles and best practices for sustainable soil management in agriculture. Participants will learn about the importance of soil conservation, erosion control, and soil health for sustainable agriculture. The course will cover various techniques and strategies for soil conservation and management, including conservation tillage, cover cropping, mulching, contour farming, and agroforestry. Practical applications of soil conservation and management for sustainable agriculture will be emphasized throughout the course.

Course Outcomes:

Upon completion of this course, students will be able to:

1. Understand the principles and importance of soil conservation and management for sustainable agriculture.
2. Evaluate and implement various soil conservation practices, such as conservation tillage, cover cropping, mulching, contour farming, and agroforestry.
3. Assess and improve soil health through soil organic matter management, nutrient management, and soil structure improvement practices.
4. Design and implement site-specific soil conservation plans for agricultural fields.
5. Recognize the economic and environmental benefits of sustainable soil management practices in agriculture.8888

	J.S. University, Shikohabad Faculty of Agricultural Sciences	Value Added Course
		AGVAC-09

Duration: 8-10 weeks (depending on the pace of the student)

Intake: 60 students

Course Modules (Syllabus):

Module-1

Introduction to Soil Conservation and Management

- Importance of soil conservation and management for sustainable agriculture
- Principles of soil conservation: erosion control, soil health, and sustainable soil management practices
- Techniques for assessing soil erosion: soil erosion models, field measurements, and erosion control planning

Module-2

Conservation Tillage and Cover Cropping

- Conservation tillage practices: no-till, reduced tillage, and minimum tillage
- Benefits and challenges of conservation tillage in sustainable agriculture
- Cover cropping as a soil conservation practice: types, selection, and management

Module-3

Mulching and Contour Farming

- Mulching as a soil conservation practice: types, benefits, and application methods
- Contour farming: principles, techniques, and benefits in preventing soil erosion
- Role of agroforestry in soil conservation and management: alley cropping, windbreaks, and riparian buffers

Module-4

Soil Health Management

- Understanding soil health: physical, chemical, and biological properties of soil
- Best practices for improving soil health: soil organic matter management, nutrient management, and soil structure improvement
- Monitoring and assessment of soil health: soil health indicators, laboratory tests, and field observations



J.S. University, Shikohabad
Faculty of Agricultural Sciences

Value Added Course

AGVAC-09

Module-5

Integrated Soil Conservation and Management

- Integrated approach to soil conservation and management: combining various practices and strategies
- Designing soil conservation plans for agricultural fields: site-specific recommendations, implementation, and monitoring
- Economic and environmental benefits of sustainable soil management practices in agriculture

Assessment:

- Weekly quizzes and assignments
- Final project on designing and implementing a soil conservation and management plan.

Reference books:

1. "Soil Conservation: Principles and Practices" by Praveen Kumar
2. "Soil and Water Conservation Engineering" by R. Suresh
3. "Soil Conservation: Problems and Prospects" by G.P. Obi Reddy

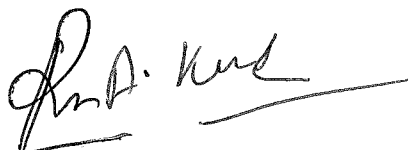


Dr. Arif
Bey


Course
Coordinator



Dean, Academic
Dr. Akhlaq



Dean
Dr. R.P. Fushwal


 (Name of Faculty) Course Coordinator	J.S. University, Shikohabad Faculty of Agricultural Sciences	Value Added Course
		AGVAC-09



(Name of Faculty) Dean of Faculty
J.S. University, Shikohabad
Faculty of Agricultural Sciences

Value Added Course

AGVAC-09

 (Name of Faculty) Director General: J.S. University, Shikohabad Faculty of Agricultural Sciences	Value Added Course
	AGVAC-09