



TECHNO INDIA UNIVERSITY

W E S T B E N G A L

Course Structure

(AY: 2025-2026)

For

B.Sc. (Hons) Agriculture

**(ICAR 6th Deans' Committee Curriculum with
NEP 2020 dated April 20, 2024)**

**Department of Agriculture Sciences
Techno India University, West Bengal**

EM-4/1, Sector-V, Salt Lake, Kolkata-700091



TECHNO INDIA UNIVERSITY

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Vision

The Department of Agriculture Sciences, Techno India University will be a *Centre of Excellence* in the field of Smart Agriculture & allied research including biotechnological, microbial, environmental, medical, and rural sectors. The department shall create graduates who endeavor for the welfare of mankind followed by agricultural innovations, skills, and creativity in the near future.

Mission

M01: To launch new academic value-added courses with viable technologies for the benefit of the students, rural and industrial fraternity.

M02: To create an awareness outreach towards socio-ethical implications of potentials of agricultural innovations & also to bridge the gap between academics and industry.

M03: Creation of skilled and smart agriculturists to help society to cope with new challenges.

M04: Creation of novel entrepreneurs for the upliftment of societal economy for all.

Programme Outcomes (POs):

Upon completion of the B.Sc. (Hons.) Agriculture programme under ICAR NEP-2020, graduates will be able to:

PO1: Discipline Knowledge: Demonstrate a comprehensive understanding of the fundamentals of agricultural science, including agronomy, genetics, soil science, plant protection, agricultural economics, and allied disciplines.

PO2: Skill Proficiency & Technical Competence: Acquire hands-on technical skills in modern agricultural practices, use of machinery, diagnostics of pests/diseases/weeds, water/soil management, and crop production, aligned to agro-ecological and local contexts.

PO3: Entrepreneurial and Business Acumen: Develop capabilities to conceive, plan, initiate, and manage agribusinesses or enterprises; prepare cost-benefit analyses; drive rural entrepreneurship.

PO4: Experiential Learning & Field Readiness: Apply classroom theory through field experiences: internships, industrial attachments, project work, on-farm learning, Student READY (Rural Entrepreneurship in Agriculture Development Yojana) etc., to become field-ready professionals.

PO5: Critical Thinking, Innovation, and Problem Solving: Analyze agricultural problems, design experiments, evaluate technologies, innovate solutions for improving productivity, sustainability, climate resilience and resource efficiency.

PO6: Digital, Data & Information Literacy: Use digital tools, information technologies, remote sensing/GIS etc., for decision support; understand and apply data-driven methods in agriculture.

PO7: Sustainability and Environmental Stewardship: Practice sustainable agriculture: conservation of soil & water, natural resource management, biodiversity conservation, use of organic inputs, and strategies to adapt to climate change.

PO8: Value Chains, Marketing & Agri-Business Integration: Understand post-harvest handling, value addition, supply chains, market linkages; ability to navigate economic, social and policy environment of agriculture.

PO9: Ethics, Professionalism & Social Responsibility: Uphold ethical standards, food safety, responsibility toward community and environment; sensitivity to rural livelihoods, agrarian contexts, social equity.

PO10: Lifelong Learning & Adaptability: Engage in continuous learning, adapt to emerging technologies and evolving agricultural challenges; flexibility to pursue higher studies, certifications, or change specializations.

PO11: Communication & Leadership: Communicate effectively (oral, written); lead teams in agricultural projects; liaise with farmers, extension agents, stakeholders; function well in team settings.

PO12: Global Perspective & Local Relevance: Contextualize agricultural knowledge and innovations within global frameworks (e.g. food security, climate change, international trade), while applying them with sensitivity to local agro-climatic, socio-economic conditions.



Course Structure for B.Sc. (H) Agriculture Syllabus (AY: 2025-2029)

Semester-I

Course Code	Course Title				Credit
		L	T	P	
Theory					
TIU-CC-UAG-T11101	Fundamentals of Agronomy- Theory	2	0	0	2
TIU-CC-UAG-T11102	Fundamentals of Soil Science- Theory	2	0	0	2
TIU-CC-UAG-T11103	Fundamentals of Horticulture- Theory	2	0	0	2
TIU-CC-UAG-T11101	Rural Sociology and Educational Psychology	2	0	0	2
TIU-MDC-UAG-T11101	Farming Based Livelihood Systems- Theory	2	0	0	2
TIU-AEC-UAG-T11101	Communication Skills- Theory	1	0	0	1
Practical					
TIU-AEC-UAG-L11101	NSS	0	0	2	1
TIU-CC-UAG-L11101	Fundamentals of Agronomy-Lab	0	0	2	1
TIU-CC-UAG-L11102	Fundamentals of Soil Science-Lab	0	0	2	1
TIU-CC-UAG-L11103	Fundamentals of Horticulture-Lab	0	0	2	1
TIU-MDC-UAG-L11101	Farming Based Livelihood Systems-Lab	0	0	2	1
TIU-AEC-UAG-L11101	Communication Skills- Lab	0	0	2	1
TIU-SEC-UAG-L11101	Biofertilizer and Biopesticide Production	0	0	4	2
TIU-SEC-UAG-L11102	Mushroom Production Technology	0	0	4	2
Sessional					
-	-	-	-	-	-
Total		11	0	20	21

TIU-NG-UAG-T11101	NG: Induction-cum-Foundation Course (Deeksha Arambh)	1	0	0	1
TIU-NG-UAG-T11102	NG: Introductory Mathematics	1	0	0	1
Add-On	NG: Basics of Computer Application	1	0	0	1

Semester-II

Course Code	Course Title				Credit
		L	T	P	
Theory					
TIU-CC-UAG-T12101	Soil Fertility Management- Theory	2	0	0	2
TIU-CC-UAG-T12102	Fundamentals of Entomology- Theory	2	0	0	2
TIU-CC-UAG-T12103	Fundamentals of Plant Pathology- Theory	2	0	0	2
TIU-CC-UAG-T12104	Livestock and Poultry Management- Theory	1	0	0	1
TIU-VAC-UAG-T12101	Environmental Studies and Disaster Management- Theory	2	0	0	2
TIU-AEC-UAG-T12101	Personality Development- Theory	1	0	0	1
Practical					
TIU-AEC-UAG-L12101	NCC	0	0	2	1
TIU-CC-UAG-L12101	Soil Fertility Management- Lab	0	0	2	1
TIU-CC-UAG-L12102	Fundamentals of Entomology- Lab	0	0	2	1
TIU-CC-UAG-L12103	Fundamentals of Plant Pathology- Lab	0	0	2	1
TIU-CC-UAG-L12104	Livestock and Poultry Management- Lab	0	0	2	1
TIU-VAC-UAG-L12101	Environmental Studies and Disaster Management- Lab	0	0	2	1
TIU-AEC-UAG-L12101	Personality Development- Lab	0	0	2	1
TIU-SEC-UAG-L12101	Seed Production Technology	0	0	4	2
TIU-SEC-UAG-L12102	Post-Harvest Processing Technology	0	0	4	2
Sessional					
-	-	-	-	-	-

	Total	11	0	20	21
Add-On	NG: Python Language	1	0	0	1



TECHNO INDIA UNIVERSITY

W E S T B E N G A L

Semester III

Course Code	Course Title				Credit
		L	T	P	
Theory					
TIU-CC-UAG-C23101	Principles of Genetics	2	0	2	3
TIU-CC-UAG-C23102	Crop Production Technology-I (Kharif crops)	2	0	2	3
TIU-CC-UAG-C23103	Production Technology of Fruit and Plantation Crops	1	0	2	2
TIU-CC-UAG-C23104	Fundamentals of Extension Education	1	0	2	2
TIU-CC-UAG-C23105	Fundamentals of Nematology	1	0	2	2
TIU-CC-UAG-C23106	Principles and Practices of Natural Farming	1	0	2	2
TIU-MDC-UAG-C23101	Entrepreneurship Development and Business Management	2	0	2	3
Practical					
TIU-AEC-UAG-L23101	Physical Education, First Aid and Yoga Practices	0	0	4	2
TIU-SEC-UAG-L23101	Beneficial Insect Farming	0	0	4	2

Sessional					
-	-	-	-	-	-
	Total	10	0	22	21
Add-On	NG:	1	0	0	1



TECHNO INDIA UNIVERSITY

W E S T B E N G A L

Semester-IV

Course Code	Course Title				Credit
		L	T	P	
Theory					
TIU-CC-UAG-C24101	Crop Production Technology-II (Rabi Crops)	2	0	2	3
TIU-CC-UAG-C24102	Basics of Plant Breeding	2	0	2	3
TIU-CC-UAG-C24103	Production Technology of Vegetables and Spices	1	0	2	2
TIU-CC-UAG-T24101	Principles of Agricultural Economics and Farm Management	2	0	0	2
TIU-CC-UAG-C24104	Farm Machinery and Power	1	0	2	2
TIU-CC-UAG-C24105	Water Management	1	0	2	2
TIU-CC-UAG-C24106	Problematic Soils and Their Management	1	0	2	2
TIU-VAC-UAG-C24101	Agri Informatics	2	0	2	3

Practical					
TIU-SEC-UAG-L24101	Horticulture Nursery Management	0	0	4	2
Sessional					
-	-	-	-	-	-
Total		12	0	18	21
Add-On	NG:	1	0	0	1



TECHNO INDIA UNIVERSITY

W E S T B E N G A L

Semester-V

Course Code	Course Title				Credit
		L	T	P	
Theory					
TIU-CC-UAG-C35101	Fundamentals of Crop Physiology	2	0	2	3
TIU-CC-UAG-C35102	Pest Management in Crops and Stored Grains	2	0	2	3
TIU-CC-UAG-C35103	Diseases of Field & Horticultural Crops & their Management	2	0	2	3
TIU-CC-UAG-C35104	Introduction to Agro-meteorology	1	0	2	2
TIU-CC-UAG-C35105	Crop Improvement - I	1	0	2	2
TIU-CC-UAG-C35106	Weed Management	1	0	2	2
TIU-CC-UAG-C35107	Ornamental Crops, MAPs and Landscaping	1	0	2	2
TIU-CC-UAG-C35108	Introductory Agro-forestry	1	0	2	2

TIU-MDC-UAG-C35101	Agricultural Marketing & Trade	2	0	2	3
Practical					
-	-	-	-	-	-
Sessional					
-	-	-	-	-	-
Total		13	0	18	22
TIU-NG-UAG-P35101	NG: Study Tour	2 weeks			2
Add-On	NG:	1	0	0	1



TECHNO INDIA UNIVERSITY

W E S T B E N G A L

Semester-VI

Course Code	Course Title				Credit
		L	T	P	
Theory					
TIU-CC-UAG-C36101	Fundamentals of Agri Biotechnology	2	0	2	3
TIU-CC-UAG-C36102	Basic and Applied Agri Statistics	2	0	2	3
TIU-CC-UAG-C36103	Essentials of Plant Biochemistry	2	0	2	3
TIU-CC-UAG-C36104	Crop Improvement - II	1	0	2	2
TIU-CC-UAG-C36105	Renewable Energy in Agriculture and Allied Sector	1	0	2	2
TIU-CC-UAG-C36106	Dryland Agriculture/ Rainfed Agriculture and Watershed Management	1	0	2	2

TIU-CC-UAG-C36107	Agricultural Microbiology and Phyto-remediation	1	0	2	2
TIU-CC-UAG-C36108	Fundamentals of Seed Science & Technology	1	0	2	2
TIU-CC-UAG-C36109	Agricultural Finance & Cooperation	1	0	2	2
Practical					
-	-	-	-	-	-
Sessional					
-	-	-	-	-	-
Total		12	0	18	21
Add-On	NG:	1	0	0	1



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W E S T B E N G A L

Semester-VII

Course Code	Course Title				Credit
		L	T	P	
Theory					
TIU-EC-UAG-C47101-20	Any 5 Elective Courses / Research Project with related courses	3	0	2	4
List of Elective Courses					
TIU-EC-UAG-C47101	Geoinformatics and Remote Sensing for Precision Farming	3	0	2	4
TIU-EC-UAG-C47102	Hi-tech Horticulture	3	0	2	4
TIU-EC-UAG-C47103	Protected Cultivation	3	0	2	4
TIU-EC-UAG-C47104	Climate Resilient Agriculture	3	0	2	4
TIU-EC-UAG-C47105	Agri-Business Management	3	0	2	4
TIU-EC-UAG-C47106	Commercial Plant Breeding	3	0	2	4
TIU-EC-UAG-C47107	Food Safety and Standards	3	0	2	4
TIU-EC-UAG-C47108	Bioformulation and Nano-formulation	3	0	2	4

TIU-EC-UAG-C47109	Biopesticides and Biofertilizers	3	0	2	4
TIU-EC-UAG-C47110	System Simulation and Agro-advisory	3	0	2	4
TIU-EC-UAG-C47111	Management of Natural Resources	3	0	2	4
TIU-EC-UAG-C47112	Agrochemicals	3	0	2	4
TIU-EC-UAG-C47113	Agricultural Journalism	3	0	2	4
TIU-EC-UAG-C47114	Biotechnology of Crop Improvement	3	0	2	4
TIU-EC-UAG-C47115	Landscaping	3	0	2	4
TIU-EC-UAG-C47116	Micro-propagation Technologies	3	0	2	4
TIU-EC-UAG-C47117	Commercial Seed Production	3	0	2	4
TIU-EC-UAG-C47118	Principles and Practices of Organic Farming/ Conservation Agriculture	3	0	2	4
TIU-EC-UAG-C47119	Food Science and Nutrition	3	0	2	4
TIU-EC-UAG-C47120	Post-Harvest Technology and Value Addition	3	0	2	4
Practical					
-	-	-	-	-	-
Sessional					
-	-	-	-	-	-
Total		15	0	10	20

Semester-VIII

Course Code	Course Title				Credit
		L	T	P	
Theory					
-	-	-	-	-	-
Practical					
TIU-P-I48101	Student READY (Rural Entrepreneurship in Agriculture Development Yozna) (Training / Industrial Attachment /Project Work /Internship)	0	0	40	20
Sessional					
-	-	-	-	-	-
Total		0	0	40	20

