TAKSHASHILA UNIVERSITY

(Tamil Nadu State Private University)

ONGUR, TINDIVANAM TK, VILLUPURAM DT

FACULTY OF SCIENCES

SCHOOL OF AGRICULTURAL SCIENCES

Department of Agriculture

REGULATION 2023

CURRICULUM & SYLLABI

B.Sc. (Hons.) Agriculture

Semester – VII

VISION AND MISSION OF UNIVERSITY

VISION:

To create change makers and world leaders similar to the ancient Takshashila University

MISSION:

The brightest minds and the best resources are used to nurture and develop the leaders of tomorrow, where they are encouraged to be eternally curious and ethically sound.

DEPARTMENT VISION AND MISSION

VISION:

Focusing on Agricultural research, teaching, and extension to use cutting-edge, sustainable technologies to satisfy human needs.

To become a globally recognized university dedicated to educating the next generation in both rural and urban areas about science-based agriculture.

MISSION:

M1:	Empower future generations through quality educational opportunities in agriculture with forefront farming technology to meet the needs of various stakeholders, including farmers, employers, industries, and society.
M2:	Enhance agricultural higher education to meet worldwide standards for advanced teaching, research, and extension.
M3:	Promote innovative technologies such as artificial intelligence, high-tech agriculture, digital agriculture, and sustainable farming to assure production and productivity.
M4:	Successfully transfer technologies from lab to farm land to assure food and water security, enhance farmers' revenues, and raise the standard of living.
M5:	Stimulating professional behavior and good ethical values to improve the leadership skills and social responsibilities.

PROGRAMME OUTCOMES (POs)

PO 1: Domain Knowledge: Apply fundamental knowledge from several agricultural disciplines to the fields of animal husbandry, agricultural extension, crop improvement, production, and protection, as well as agri-informatics.

PO 2: Problem analysis: To improve agricultural output, identify gaps by examining regular difficulties and challenges in farming.

PO 3: Formulate solution: Design and develop solutions to complicated and specialized agricultura l challenges, with an emphasis on cultural, socioeconomic, and environmental considerations.

PO 4: Conduct surveys and investigations: Evaluate and evaluate the available agricultural inform ation in order to provide sustainable solutions by using research-based knowledge and methods.

PO 5: Use of Contemporary Concepts and Tools: Create, select, and implement suitable methods, materials, and present-day tools to forecast agricultural outcome.

PO 6: Social Role: Determine logic and background information to evaluate and advance environmental safety, livelihood security, and nutrition.

PO 7: Environment and Sustainability: Recognize the effects of regional and global environmental problems and take appropriate action to produce agricultural products in a sustainable manner.

PO 8: Ethics: Put ethical concepts into practice and follow obligations and standards in the field.

PO 9: Teamwork: Contribute well as a leader or an individual in a variety of multidisciplinary, cross-cultural teams.

PO 10: Efficient communication: Understand and compose succinct scientific reports, deliver persuasive speeches, and interact with stakeholders in an efficient manner.

PO 11: Finance and project management: Able to exhibit scientific understanding in their roles as financial managers and entrepreneurs.

PO 12: Life-long learning: Make an initiative to pursue self-sustaining, continuous learning in order to stay updated with emerging technology and maintain your professional proficiency in agriculture.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO1: Industry Leadership

Demonstrate advanced managerial competency and domain expertise to lead teams, drive strategy, and deliver measurable results in dynamic business environments.

PEO2: Research and Development

Identify market opportunities, apply data-driven decision-making, and develop scalable solutions as entrepreneurs or intrapreneurs within established organizations

PEO3: Professional Ethics

Uphold rigorous ethical standards and corporate governance principles while making decisions that balance profitability with social and environmental responsibility

PEO4: Global Citizenship

Operate effectively in multicultural, international business contexts by leveraging global perspectives, cross-cultural intelligence, and awareness of global economic trends.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Domain Knowledge

Demonstrate an in-depth understanding of financial management, banking, investment, financial markets, financial technologies, and digital financial services to analyze complex financial problems and develop innovative solutions in dynamic business environments.

PSO2: Digital Finance and Technology Integration

Apply financial technologies, artificial intelligence, blockchain, data analytics, enterprise resource planning (ERP), digital payment systems, cloud computing, and emerging FinTech solutions to optimize financial operations, support data-driven decision-making, enhance customer experience, and manage financial risks.

PSO3: Professional Competency

Exhibit a high level of professional competence through financial analysis, strategic thinking, ethical decision-making, regulatory compliance, leadership, communication, teamwork, and lifelong learning, enabling successful careers in banking, financial services, FinTech organizations, consulting, entrepreneurship, and global financial ecosystems.

CURRICULUM

School : School of Agricultural Science **Batch** : 2023-2027

Program: B.Sc. (Hons.) Agriculture **Regulation** : R23

SEMESTER- VII							
Sl. No.	**Course code**	**Course title**	**Category**	**Credit hours**	**Maximum marks**		
					CAM	**ESM**	**Total**
Program Core							
1.	U23AG7P01	Rural Agricultural Work Experience and Agro- Industrial Attachment (RAWE & AIA)	PC	20 (0+20)	100	-	100
2.	U23AG7P02	Educational Tour - II (All India)	PC	1 (0+1)	100	-	100
			Total	**21 (0+21)**	**200**	**-**	**200**

*PC – Program Core
*SEC – Skill Enhancement Course
*DSE – Discipline Elective
*GE – Generic Elective
*TIL – Takshashila Innovative Learning
*GC – Green Credit
*AEC - Ability Enhancement Course

U23AG7P01	Rural Agricultural Works Experience and Agro-Industrial Attachment (RAWE & AIA)	(0+20)

COURSE OBJECTIVES:
• To provide an opportunity to the students to understand the rural setting in relation to agriculture and allied activities.
• To make the students familiar with socio-economic conditions of the farmers and their problems.
• To impart diagnostic and remedial knowledge to the students relevant to real field situations through practical training.
• To develop communication skills in students using extension teaching methods in transfer of technology.
• To develop confidence and competence to solve agricultural problems.

COURSE OUTCOMES: *After completion of the course, the students will be able to*	
CO1 :	Explain the rural agricultural ecosystem, farming systems, and the role of allied agricultural activities in rural development.
CO2 :	Analyze the socio-economic conditions of farming communities and identify the major constraints affecting agricultural productivity and livelihoods.
CO3 :	Apply diagnostic and remedial approaches to address real-world agricultural problems through field-based practical training.
CO4 :	Demonstrate effective communication and extension education skills for the transfer of agricultural technologies to farmers and rural stakeholders.
CO5 :	Develop problem-solving, decision-making, and professional competencies to confidently address agricultural challenges in diverse field situations.

The Rural Agricultural Work Experience and Agro-Industrial Attachment (RAWE & AIA). This program will be undertaken by the students during the seventh semester for a total duration of 20 weeks with the weightage of 0+20 credit hours in two parts, namely, RAWE AND AIA. It will consist of general orientation and on-campus training by different faculties followed by village attachment/unit attachment in university/ college/ KVK or a research station, the students would be attached with the agro-industries to get an experience of the industrial environment and working. Due weightage in terms of credit hours will be given depending upon the duration of stay of students in village/agro-industries. At the end of RAWE/AIA, the students will be given one week for project report preparation, presentation and evaluation. The students would be required to record their observations in field and agro-industries on daily basis and will prepare their project report based on these observations.

Village Stay Programme (60 Days)

Study of rural situations including village settlement pattern, demography, climate, land use pattern, natural resources, infrastructure, rural institutions, organizations, customs, beliefs, and value systems. Study of cropping patterns, farming systems, adoption of improved agricultural technologies, productivity, yield gaps, and production constraints in major crops. Understanding

social participation, leadership, scientific orientation and the role of women and youth in agricultural development. Practice of extension methods using individual, group, and mass contact approaches with appropriate audio-visual aids. Documentation of Indigenous Technical Knowledge (ITK) and its relevance to sustainable agriculture. Conduct Participatory Rural Appraisal (PRA) for resource assessment and village planning. Study communication systems, Self-Help Groups (SHGs) and commodity groups. Organize need-based demonstrations and awareness programmes. Prepare Whole Village Development Plan and Individual Farm Plans through interaction with farmers of different categories. Document successful farmers and innovative agricultural practices.

Assistant Director of Agriculture Attachment (10 Days)

Study the organizational structure, functions, and extension activities of the Department of Agriculture and allied departments. Understand the implementation of government agricultural development programmes, farmer welfare schemes, input distribution systems, and digital agricultural services. Observe the functioning of soil testing laboratories, plant protection services and agricultural advisory systems.

NGO Attachment (10 Days)

Study the objectives, organizational structure, funding sources, and extension activities of NGOs involved in agriculture and rural development. Understand community mobilization, livelihood promotion, women empowerment, and capacity-building programmes. Interact with target groups and participate in extension and rural development activities.

FPO and Agro industry Attachment (10 Days)

Study the organizational structure, objectives, and functioning of Farmer Producer Organizations (FPOs) and Agro-Industries. Understand business models, governance, input procurement, aggregation, value addition, marketing, and financial management. Study licensing, quality standards, and legal compliance in agro-industries. Gain exposure to production management, supply chain, processing, packaging, branding, and marketing of agricultural products. Interact with FPO members and industry professionals to understand entrepreneurship, agribusiness management, and market linkages.

U23AG7P02	Educational Tour –II (All India)	(0+1)

COURSE OBJECTIVES:
• Understand different cropping systems and farming practices across Indi
• Visit ICAR institutes, State Agricultural Universities, KVKs, research stations, seed production units, and agro-industries
• Gain exposure to modern agricultural technologies and extension activities
• Study region-specific agricultural problems and their solutions
• Develop observation, documentation, communication, and teamwork skills

COURSE OUTCOMES:	
After completion of the course, the students will be able to	
CO1 :	Explain diverse cropping systems across India.
CO2 :	Describe the role of agricultural institutions.
CO3 :	Demonstrate modern agricultural technologies.
CO4 :	Analyze regional agricultural problems.
CO5 :	Demonstrate field observation and report writing skills.

Educational tour to important National Agricultural Research Institutes, ICAR Institutes, State Agricultural Universities, Krishi Vigyan Kendras (KVKs), Regional Research Stations, Seed Production Farms, Agricultural Industries, Food Processing Units, Agri-business Enterprises, Protected Cultivation Units, Organic Farms, Precision Farming Demonstration Centres, Farmer Producer Organizations (FPOs), Commodity Boards, Agricultural Marketing Centres, and other institutions related to agriculture and allied sectors.

The tour provides exposure to diverse agro-climatic regions, cropping systems, soil and water management practices, crop production technologies, horticulture, forestry, livestock, fisheries, farm mechanization, protected cultivation, post-harvest management, value addition, agribusiness management, and agricultural extension programmes.

Students will interact with scientists, extension specialists, entrepreneurs, and progressive farmers to understand region-specific agricultural problems, innovative technologies, and successful farming models. The course also includes the study of socio-economic and cultural aspects of farming communities, adoption of modern technologies, climate-resilient agriculture, and sustainable agricultural practices.

Each student shall maintain a field diary documenting daily observations and submit a comprehensive educational tour report highlighting institutional activities, technologies observed, major learning outcomes, and recommendations. Students shall also present a seminar based on their tour experience as part of the course evaluation.