



RAFFLES
UNIVERSITY

TEACHING PLAN: Farming System and Sustainable Agriculture

SCHOOL: (SOAS) SCHOOL OF AGRICULTURAL SCIENCES		ACADEMIC SESSION: 2023 – 2024		FOR STUDENTS’ BATCH: IV th Semester	
1	Course No.	AAG-T-203			
2	Course Title	Farming System and Sustainable Agriculture			
3	Credits	1 (1+0)			
4	Learning Hours		Contact Hours	48	
			Assessment	22	
			Guided Study	20	
			Total hours	90	
5	Course Objective	1. To impart knowledge to the students on the fundamentals of farming systems and sustainable agriculture 2. To study the various components of sustainable agriculture.			
6	Course Outcomes	1. Student can able to understand about maximum possible return and profitability by different enterprises 2. A solid understanding of the utilization and conservation of available resources 3. To show how agricultural scientists are attempting to minimize agricultural pollution and sustain food production adequate for the increasing population 4. The student will be able to understand IFS model in different agro-climatic zones 5. The student will study about farming systems and sustainable agriculture			
7	Outline syllabus:				
7.01	Paper Code	Unit	Introduction	Page Numbers ¹	Lect ures
7.02	AAG-T-203	Unit I	1. Farming System- Scope, Importance, Concept, Types and their systems. 2. Factors affecting types of farming, Farming system components and their maintenance. 3. Cropping system and pattern, multiple cropping systems.	1-25	3
		Unit II	1. Efficient cropping system and their evaluation, Allied enterprises and their importance, 2. Tools for determining production and efficiencies in cropping and farming system. 3. Sustainable agriculture- Problems and its impact on agriculture, indicators of sustainability. 4. Adaptation and mitigation, conservation agriculture strategies in agriculture.	26-73	4
		Unit III	1. HEIA, LEIA and LEISA and its techniques for sustainability 2. Integrated farming system- Historical background, objectives and characteristics, components and its advantages 3. Site specific development of IFS model for different agro-climatic zones, resource use efficiency and optimization techniques.	74-99	3
		Unit IV	1. Resource cycling and flow of energy in different farming system, farming system and environment. 2. Visit of IFS model in different agro-climatic zones of nearby states University/ institutes and farmers field.	100-108	2
8	Course Evaluation				
8.1	CA: 20%				
8.11	Attendance	25%			
8.12	Homework	2 Assignments-50%			

8.13	Quizzes	2 Quizzes-25%
8.14	Projects	-
8.15	Presentation	-
8.16	Any other	--
8.2	MTE	30%
8.3	End-term examination: 50%	
9	Text Books & References	
9.1	Text book	
9.2	References	1. Farming system and sustainable agriculture by Reddy SR Kalyani Publications, Ludhiana 2021 2. Principles of Agronomy, S R Reddy
9.3	Video References	1. https://www.youtube.com/watch?v=b3LGtuV9mek&feature=youtu.be 2. https://www.youtube.com/watch?v=QTlyhKFXCgM 3. https://www.youtube.com/watch?v=Z2cVANj0shI 4. https://www.youtube.com/watch?v=baZVR-ZF0-I 5. https://www.youtube.com/watch?v=lefp-FzlOXg 6. https://www.youtube.com/watch?v=EKOZFP8GCjE 7. https://www.youtube.com/watch?v=wRHqYfils9Q 8. https://www.youtube.com/watch?v=H2gvCVb7Ozk 9. https://www.youtube.com/watch?v=VOBwgDttas0 10. https://www.youtube.com/watch?v=ATAS2B3CcgY 11. https://www.youtube.com/watch?v=AT97uP1GNR8 12. https://www.youtube.com/watch?v=RXSNH1OFQqU

Mapping of Outcomes v. Topics

Outcome no. → Syllabus topic↓	1	2	3	4	5
Paper Code. Unit I (1)					✓
Paper Code. Unit I (2)	✓				✓
Paper Code. Unit I (3)					✓
Paper Code. Unit II (1)					✓
Paper Code. Unit II (2)	✓				✓
Paper Code. Unit II (3)			✓		✓
Paper Code. Unit II (4)		✓			✓
Paper Code. Unit III (1)			✓		✓
Paper Code. Unit III (2)					✓
Paper Code. Unit III (3)					✓
Paper Code. Unit IV (1)		✓			✓
Paper Code. Unit IV (2)				✓	✓

QUESTION BANK

1. Define farming system?
2. Define sustainable agriculture?
3. Define mixed farming?
4. Define subsistence farming?
5. Explain the different components of farming systems?
6. Write the factors affecting types of farming?
7. Explain the resource cycling and flow of energy in different farming system
8. Define integrated farming system?
9. Write a short note on HEIA?
10. Write a short note on LEISA?
11. Write about Cultivated Land Utilization Index?
12. Define resource use efficiency?
13. Define cropping system?
14. Explain the concept of farming system?
15. Explain about factors affecting type of farming?
16. Explain concepts of resource use efficiency?

17. Explain scope of farming system?
18. Explain the importance of farming system?
19. Explain in detail about types of farming system?
20. Explain about allied enterprises?
21. List out the problems and impact of sustainable agriculture on agriculture?
22. Difference between conventional and conservation agriculture?
23. What are the ills of green revolution?
24. List out different IFS model and explain any three models?
25. Explain the advantage of IFS?
26. Explain about the Integrated Farming systems for different Agro-climatic zones (India)?
27. List out the goal and objectives of Integrated Farming system?
28. List out the advantages of conservation agriculture?
29. List out the constraints of conservation agriculture?

PROJECTS (To be given to group of students)
