

FACULTY OF AGRICULTURAL SCIENCES

ORDINANCE (2020-21)

B.Sc. (Hons.) Agriculture



**SHREE GURU GOBIND SINGH TRICENTENARY UNIVERSITY
GURUGRAM (DELHI-NCR)**

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SGT University
Budhera, Gurugram

Scheme of Examination
1st Semester/ 1st Year

Paper Code	Subject/Paper	Internal Exam.			External Exam.	Total Marks	Teaching Scheme
		Theory	Assignment	Practical	Theory		
11010101	Fundamentals of Agronomy	20	5	25	50	100	4 (3+1)
11010102	Introduction to Forestry	10	5	35	50	100	2 (1+1)
11010103	Fundamentals of Plant Biochemistry and Biotechnology	15	5	30	50	100	3 (2+1)
11010104	Fundamentals of Soil Science	15	5	30	50	100	3 (2+1)
11010105	Fundamentals of Entomology	15	5	30	50	100	3 (2+1)
11010106	Comprehension & Communication Skills in English	10	5	35	50	100	2 (1+1)
11010107	Introductory Biology*	10	5	35	50	100	2 (1+1)
11010108	Elementary Mathematics*	40	10	-	50	100	2 (2+0)
11010109	Agricultural Heritage*	40	10	-	50	100	1 (1+0)
11010110	Rural Sociology & Educational Psychology	40	10	-	50	100	2 (2+0)
11010111	Human Values & Ethics (Non gradial)**	40	10	-	50	100	1(1+0)**
11010112	NSS/NCC/Physical Education & Yoga Practices**	-	-	-	100	100	2 (0+2)**
Total							27 (18+9)

*Remedial course, **NC: Non-gradial course

2nd Semester/ 1st Year

Paper Code	Subject/Paper	Internal Exam.			External Exam.	Total Marks	Teaching Scheme
		Theory	Assignment	Practical	Theory		
11010201	Principles of Genetics	15	5	30	50	100	3 (2+1)
11010202	Agricultural Microbiology	10	5	35	50	100	2 (1+1)
11010203	Soil and Water Conservation Engineering	10	5	35	50	100	2 (1+1)
11010204	Fundamentals of Crop Physiology	10	5	35	50	100	2 (1+1)
11010205	Fundamentals of Agricultural Economics	40	10	-	50	100	2 (2+0)
11010206	Fundamentals of Plant Pathology	20	5	25	50	100	4 (3+1)
11010207	Insect Ecology and Pest Management	15	5	30	50	100	3 (2+1)
11010208	Fundamentals of Agricultural Extension Education	15	5	30	50	100	3 (2+1)
11010209	Communication Skills and Personality Development	10	5	35	50	100	2 (1+1)
11010210	Fundamentals of Horticulture	10	5	35	50	100	2 (1+1)
Total							25 (16+9)

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3rd Semester/ 2nd Year

Paper Code	Subject/Paper	Internal Exam.			External Exam. Theory	Total Marks	Teaching Scheme
		Theory	Assignment	Practical			
11010301	Crop Production Technology – I (Kharif Crops)	10	5	35	50	100	2 (1+1)
11010302	Fundamentals of Plant Breeding	15	5	30	50	100	3 (2+1)
11010303	Agriculture Finance and Cooperation	15	5	30	50	100	3 (2+1)
11010304	Agri- Informatics	10	5	35	50	100	2 (1+1)
11010305	Farm Machinery and Power	10	5	35	50	100	2 (1+1)
11010306	Production Technology for Vegetables and Spices	10	5	35	50	100	2 (1+1)
11010307	Environmental Studies and Disaster Management	15	5	30	50	100	3 (2+1)
11010308	Statistical Methods	10	5	35	50	100	2 (1+1)
11010309	Livestock and Poultry Management	20	5	25	50	100	4 (3+1)
Total							23 (14+9)

4th Semester/ 2nd Year

Paper Code	Subject/Paper	Internal Exam.			External Exam. Theory	Total Marks	Teaching Scheme
		Theory	Assignment	Practical			
11010401	Crop Production Technology –II (Rabi Crops)	10	5	35	50	100	2 (1+1)
11010402	Production Technology for Ornamental Crops, MAP and Landscaping	10	5	35	50	100	2 (1+1)
11010403	Renewable Energy and Green Technology	10	5	35	50	100	2 (1+1)
11010404	Problematic Soils and their Management	40	10	-	50	100	2 (2+0)
11010405	Production Technology for Fruit and Plantation Crops	10	5	35	50	100	2 (1+1)
11010406	Principles of Seed Technology	15	5	30	50	100	3 (2+1)
11010407	Farming System & Sustainable Agriculture	40	10	-	50	100	1 (1+0)
11010408	Agricultural Marketing Trade & Prices	15	5	30	50	100	3 (2+1)
11010409	Introductory Agro-meteorology & Climate Change	10	5	35	50	100	2 (1+1)
11010001-012	Elective Course*	*ANNEXURE-I				100	3
Total							19 (12+7) +3

*ANNEXURE- I


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5th Semester/ 3rd Year

Paper Code	Subject/Paper	Internal Exam.			External Exam. Theory	Total Marks	Teaching Scheme
		Theory	Assignment	Practical			
11010501	Principles of Integrated Disease Management	10	5	35	50	100	2 (1+1)
11010502	Manures, Fertilizers and Soil Fertility Management	15	5	30	50	100	3 (2+1)
11010503	Pests of Crops and Stored Grain and their Management	15	5	30	50	100	3 (2+1)
11010504	Diseases of Field and Horticultural Crops and their Management- I	15	5	30	50	100	3 (2+1)
11010505	Crop Improvement-I (<i>Kharif Crops</i>)	10	5	35	50	100	2 (1+1)
11010506	Entrepreneurship Development and Business Communication	10	5	35	50	100	2 (1+1)
11010507	Geoinformatics and Nano-technology and Precision Farming	10	5	35	50	100	2 (1+1)
11010508	Practical Crop Production – I (<i>Kharif crops</i>)	-	-	100	-	100	2 (0+2)
11010509	Intellectual Property Rights	40	10	-	50	100	1 (1+0)
11010001-012	Elective Course*	*ANNEXURE- I				100	3
Total							20 (11+9)+3

*ANNEXURE- I

6th Semester/ 3rd Year

Paper Code	Subject/Paper	Internal Exam.			External Exam. Theory	Total Marks	Teaching Scheme
		Theory	Assignment	Practical			
11010601	Rainfed Agriculture & Watershed Management	10	5	35	50	100	2 (1+1)
11010602	Protected Cultivation and Secondary Agriculture	10	5	35	50	100	2 (1+1)
11010603	Diseases of Field and Horticultural Crops and their Management-II	15	5	30	50	100	3 (2+1)
11010604	Post-harvest Management and Value Addition of Fruits and Vegetables	10	5	35	50	100	2 (1+1)
11010605	Management of Beneficial Insects	10	5	35	50	100	2 (1+1)
11010606	Crop Improvement-II (<i>Rabi crops</i>)	10	5	35	50	100	2 (1+1)
11010607	Practical Crop Production –II (<i>Rabi crops</i>)	-	-	100	-	100	2 (0+2)
11010608	Principles of Organic Farming	10	5	35	50	100	2 (1+1)
11010609	Farm Management, Production & Resource Economics	10	5	35	50	100	2 (1+1)
11010610	Principles of Food Science and Nutrition	40	10	-	50	100	2 (2+0)
11010001-012	Elective Course*	*ANNEXURE- I				100	3
Total							21 (11+10)+3

*ANNEXURE- I


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7th Semester/4th Year
Rural Agricultural Work Experience (RAWE)
Course Credits: 20(0+20)

S. No.	Rural Agricultural Work Experience and Agro-industrial Attachment (RAWE & AIA)			
	Activities	Code	No. of weeks	Credits
1.	General orientation & on campus training by different faculties	11010701	1	14
	Village attachment		8	
	Unit attachment in Univ./ College. KVK/ Research Station attachment		5	
2	Plant clinic	11010702	2	2
3	Agro-industrial attachment	11010703	3	4
	Project report preparation, presentation and evaluation		1	
Total weeks for RAWE & AIA			20	20

- Agro- Industrial Attachment: The students would be attached with the agro-industries for a period of 3 weeks to get an experience of the industrial environment and working.
- Educational tour will be conducted in break between IV & V Semester or VI & VII Semester.

RAWE Component-I:

Village Attachment Training Programme:

S. No.	Activity	Duration
1.	Orientation and Survey of Village	1 week
2.	Agronomical Interventions	1 week
3.	Plant Protection Interventions	1 week
4.	Soil Improvement Interventions (Soil sampling and testing)	1 week
5.	Fruit and Vegetable Production Interventions	1 week
6.	Food Processing and Storage Interventions	1 week
7.	Animal Production Interventions	1 week
8.	Extension and Transfer of Technology activities	1 week

RAWE Component –II:

Agro Industrial Attachment:

- Students shall be placed in Agro-and Cottage industries and Commodities Boards for 03 weeks.
- Industries include Seed/Sapling production, Pesticides-insecticides, Post harvest-processing value addition, Agri-finance institutions, etc.

Activities and Tasks during Agro-Industrial Attachment Programme

- Acquaintance with industry and staff
- Study of structure, functioning, objective and mandates of the industry
- Study of various processing units and hands-on trainings under supervision of industry staff
- Ethics of industry
- Employment generated by the industry
- Contribution of the industry promoting environment
- Learning business network including outlets of the industry
- Skill development in all crucial tasks of the industry
- Documentation of the activities and task performed by the students
- Performance evaluation, appraisal and ranking of students

8th Semester/ 4th Year
Modules for Skill Development and Entrepreneurship

A student has to register 20 credits opting for two modules of (0+10) credits each (total 20 credits) from the package of modules.

Paper Code	Title of the module	Credits
11010801	Production Technology for Bioagents and Biofertilizers	0+10
11010802	Seed Production and Technology	0+10
11010803	Mushroom Cultivation Technology	0+10
11010804	Soil, Plant, Water and Seed Testing	0+10
11010805	Commercial Beekeeping	0+10
11010806	Poultry Production Technology	0+10
11010807	Commercial Horticulture	0+10
11010808	Floriculture and Landscaping	0+10
11010809	Food Processing	0+10
11010810	Agriculture Waste Management	0+10
11010811	Organic Production Technology	0+10
11010812	Commercial Sericulture	0+10

Note: In addition to above ELP modules other important modules may be given to the students.

Evaluation of Experiential Learning Programme (ELP):

S. No.	Parameters	Max. Marks
1.	Project Planning and Writing	10
2.	Presentation	10
3.	Regularity	10
4.	Monthly Assessment	10
5.	Output Delivery	10
6.	Monthly Assessment	10
7.	Output Delivery	10
8.	Technical Skill Development	10
9.	Entrepreneurship Skills	10
10.	Business Networking Skills	10
11.	Report Writing Skills	10
12.	Final Presentation	10
	Total	100

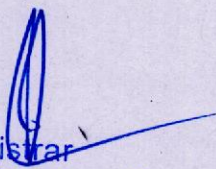

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Annexure –I

Elective Courses:

A student can select three elective courses out of the following and offered during 4th, 5th and 6th semesters:

Paper Code	Courses	Internal Exam.			External Exam.	Total Marks	Teaching Scheme
		Theory	Assignment	Practical	Theory		
11010001	Agribusiness Management	15	5	30	50	100	3 (2+1)
11010002	Agrochemicals	15	5	30	50	100	3 (2+1)
11010003	Commercial Plant Breeding	05	5	40	50	100	3 (1+2)
11010004	Landscaping	15	5	30	50	100	3 (2+1)
11010005	Food Safety and Standards	15	5	30	50	100	3 (2+1)
11010006	Biopesticides & Biofertilizers	15	5	30	50	100	3 (2+1)
11010007	Protected Cultivation	15	5	30	50	100	3 (2+1)
11010008	Micro propagation Technologies	05	5	40	50	100	3 (1+2)
11010009	Hi-tech. Horticulture	15	5	30	50	100	3 (2+1)
11010010	Weed Management	15	5	30	50	100	3 (2+1)
11010011	System Simulation and Agro-advisory	15	5	30	50	100	3 (2+1)
11010012	Agricultural Journalism	15	5	30	50	100	3 (2+1)


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ANNEXURE- I

ELECTIVE COURSES

Agri-business Management

Paper code 11010001

Credits: 3 (2+1)

Theory

Unit-1

Transformation of agriculture into agribusiness, various stakeholders and components of agribusiness systems. Importance of agribusiness in the Indian economy and New Agricultural Policy. Distinctive features of Agribusiness Management: Importance and needs of agro-based industries, Classification of industries and types of agro based industries. Institutional arrangement, procedures to set up agro based industries. Constraints in establishing agro-based industries.

Unit-2

Agri-value chain: Understanding primary and support activities and their linkages. Business environment: PEST & SWOT analysis. Management functions: Roles & activities, Organization culture. Planning, meaning, definition, types of plans. Purpose or mission, goals or objectives, Strategies, policies procedures, rules, programs and budget.

Unit-3

Components of a business plan, Steps in planning and implementation. Organization staffing; directing and motivation. Ordering, leading, supervision, communications, control. Capital Management and Financial management of Agribusiness. Financial statements and their importance. Marketing Management: Segmentation, targeting & positioning.

Unit-4

Marketing mix and marketing strategies. Consumer behaviour analysis, Product Life Cycle (PLC). Sales & Distribution Management. Pricing policy, various pricing methods. Project Management definition, project cycle, identification, formulation, appraisal, implementation, monitoring and evaluation. Project Appraisal and evaluation techniques.

Practical

Study of agri-input markets: Seed, fertilizers, pesticides. Study of output markets: grains, fruits, vegetables, flowers. Study of product markets, retails trade commodity trading, and value added products. Study of financing institutions- Cooperative, Commercial banks, RRBs, Agribusiness Finance Limited, NABARD. Preparations of projects and Feasibility reports for agribusiness entrepreneur. Appraisal/evaluation techniques of identifying viable project- Non-discounting techniques. Case study of agro-based industries. Trend and growth rate of prices of agricultural commodities. Net present worth technique for selection of viable project. Internal rate of return.

Suggested Readings:

Sr. No.	Books
1.	Subba rao reddy, S. and P. Raghav Rao. Agriculture finance and management. Oxford and IBH Publication company Ltd. New Delhi
2.	Dwivedi, D.N. Managerial Economics. Vikas Publishing House. New Delhi
3.	Dhingra, I.C, Indian economic problems. Sultan chand and sons, New Delhi

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