

Program Scheme
Bachelor of Science (Hons.)
Agriculture

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Semester I- VIII
(2020- 2024)



RNB GLOBAL UNIVERSITY
RNB Global City, Ganganagar Road,
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Document Release Notice

Detailed Program Scheme for all Semesters

Release: Version 1.0

Name of Program	Bachelor of Science (Hons.) Agriculture
Abbreviated Program Name	B.Sc. (Hons.) Agri.
Updated on	Dec'20
Approved By	BOS

OVERVIEW

RNB Global University follows Semester System along with Choice Based Credit System as per latest guidelines of University Grants Commission (UGC). Accordingly, each academic year is divided into two semesters, **Odd (July-December) and Even (January-June)**. Also, the university follows a system of continuous evaluation along with regular updating in course curricula and teaching pedagogy. Kindly be noted that Lab Includes: Laboratory work / Field Work/Industry Visits/Practical/Hands on Experience.

Course Scheme

Name of Program	Bachelor of Science (Hons.) Agriculture
Duration of Program	4 years
Number of Semester	8
Total Credit of Program	220

DETAILED CREDIT STRUCTURE

Year 1	Semester I	26 credits
	Semester II	29 credits
Year 2	Semester III	31 credits
	Semester IV	29 credits
Year 3	Semester V	31 credits
	Semester VI	28 credits
Year 4	Semester-VII	26 credits
	Semester-VIII	20 credits
Total Credits		220 Credits

SEMESTER WISE COURSE DETAILS

Semester -I

S.No.	Course Code	Course Name	L	T	P	Credits
1.	20000100	Principles of Agronomy and Meteorology	2	1	0	3
2.	20000200	Principles of Agronomy and Meteorology Lab	0	0	2	1
3.	20000300	Introduction to Soil Science	2	0	0	2
4.	20000400	Introduction to Soil Science Lab	0	0	2	1
5.	20000500	Elementary Genetics	2	0	0	2
6.	20000600	Elementary Genetics Lab	0	0	2	1
7.	20000700	Statistical Methods	2	1	0	3
8.	20000800	Introduction to Horticulture	2	0	0	2
9.	20000900	Introduction to Horticulture Lab	0	0	2	1
10.	20001000	Principles of Agricultural Economics	2	0	0	2
11.	99002200	Business Communication	3	1	0	4
12.	20001100	Ability and Skill Enhancement - I	2	0	0	2
13.	99002800	Workshops & Seminars	-	-	-	1
14.	99002700	Human Values & Social Service/NCC/NSS	-	-	-	1
Total			17	3	8	26

Semester -II

S. No.	Course Code	Course Name	L	T	P	Credits
1.	20001200	Plant Biochemistry	2	0	0	2
2.	20001300	Plant Biochemistry Lab	0	0	2	1
3.	20001400	Microbiology	2	0	0	2
4.	20001500	Microbiology Lab	0	0	2	1

5.	20001600	Introduction to Entomology and Nematology	2	1	0	3
6.	20001700	Introduction to Entomology and Nematology Lab	0	0	2	1
7.	20001800	Irrigation & Water Management	2	1	0	3
8.	20001900	Rural Sociology and Educational Psychology	2	1	0	3
9.	20002000	Natural Resources and Farm Management	2	0	0	2
10.	20002100	Fundamentals of Plant Breeding	2	0	0	2
11.	20002200	Fundamentals of Plant Breeding Lab	0	0	2	1
12.	99001900	Environmental Studies	3	1	0	4
13.	20002300	Ability and Skill Enhancement - II	2	0	0	2
14.	99002800	Workshops & Seminars	-	-	-	1
15.	99002700	Human Values & Social Service/NCC/NSS	-	-	-	1
Total			19	4	8	29

Semester - III

S.No.	Course Code	Course Name	L	T	P	Credits
1.	20012200	Crop Production Technology - I (Kharif Crops)	1	0	0	1
2.	20012300	Crop Production Technology - I Lab(Kharif Crops)	0	0	2	1
3.	20012400	Soil & water Conservation Engineering	2	0	0	2
4.	20012500	Soil & water Conservation Engineering Lab	0	0	2	1
5.	20012600	Agricultural Finance and Cooperation	2	0	0	2
6.	20012700	Agricultural Finance and Cooperation Lab	0	0	2	1
7.	20012800	Agri- Informatics	1	0	0	1
8.	20012900	Agri- Informatics Lab	0	0	2	1
9.	20013000	Farm Machinery and Power	1	0	0	1
10.	20013100	Farm Machinery and Power lab	0	0	2	1
11.	20013200	Production Technology for Vegetables and Spices	1	0	0	1

12.	20013300	Production Technology for Vegetables and Spices Lab	0	0	2	1
13.	20013400	Fundamentals of Crop Physiology	2	0	0	2
14.	20013500	Fundamentals of Crop Physiology Lab	0	0	2	1
15.	20013600	Fundamentals of Plant Pathology	3	0	0	3
16.	20013700	Fundamentals of Plant Pathology Lab	0	0	2	1
17.	20013800	Livestock and Poultry Management	3	0	0	3
18.	20013900	Livestock and Poultry Management Lab	0	0	2	1
19.	20014000	Agriculture Heritage & Human Values & Ethics	0	0	0	2
20.	20014100	Ability and Skill Enhancement -III	2	0	0	2
21.	99002800	Workshops & Seminars	-	-	-	1
22.	99002700	Human Values & Social Service/NCC/NSS	-	-	-	1
Total			18	0	18	31

Semester - IV

S.No	Course Code	Course Name	L	T	P	Credits
1.	20014200	Crop Production Technology -II (Rabi Crops)	1	0	0	1
2.	20014300	Crop Production Technology -II (Rabi Crops) Lab	0	0	2	1
3.	20014400	Production Technology for Ornamental Crops, MAP and Landscaping	1	0	0	1
4.	20014500	Production Technology for Ornamental Crops, MAP and Landscaping Lab	0	0	2	1
5.	20014600	Renewable Energy and Green Technology	1	0	0	1
6.	20014700	Renewable Energy and Green Technology Lab	0	0	2	1
7.	20014800	Problematic Soils and their Management	2	0	0	2
8.	20014900	Production Technology for Fruit and Plantation Crops	2	0	0	1
9.	20015000	Production Technology for Fruit and Plantation Crops Lab	0	0	2	1
10.	20015100	Principles of Seed Technology	1	0	0	1
11.	20015200	Principles of Seed Technology lab	0	0	4	2
12.	20015300	Plant Biotechnology	2	0	0	2
13.	20015400	Plant Biotechnology Lab	0	0	2	1
14.	20015500	Agricultural Marketing Trade & Prices	2	0	0	2
15.	20015600	Agricultural Marketing Trade & Prices Lab	0	0	2	1

16.	20026000	Fundamentals of Agriculture Extension Education	2	0	0	2
17.	20026100	Fundamentals of Agriculture Extension Education Lab	0	0	2	1
18.	-	Elective-I	2	0	0	2
19.	-	Elective Lab-I	0	0	2	1
20.	20015900	Ability and Skill Enhancement IV	2	0	0	2
21.	99002800	Workshops & Seminars	-	-	-	1
22.	99002700	Human Values & Social Service/NCC/NSS	-	-	-	1
Total			19	0	18	29

Electives

Elective	Course Code	Course Name
Elective I	20016000	Agribusiness Management
	20016100	Agribusiness Management Lab
	20016200	Agrochemicals
	20016300	Agrochemicals Lab
	20016400	Commercial Plant Breeding
	20016500	Commercial Plant Breeding Lab
	20016600	Landscaping
	20016700	Landscaping Lab

Semester - V

S. No.	Course Code	Course Name	L	T	P	Credits
1.	20016800	Principles of Integrated Pest and Disease Management	2	0	0	2
2.	20016900	Principles of Integrated Pest and Disease Management Lab	0	0	2	1
3.	20017000	Manures, Fertilizers and Soil Fertility Management	2	0	0	2
4.	20017100	Manures, Fertilizers and Soil Fertility Management lab	0	0	2	1
5.	20017200	Pests of Crops and Stored Grain and their Management	2	0	0	2
6.	20017300	Pests of Crops and Stored Grain and their Management Lab	0	0	2	1
7.	20017400	Diseases of Field and Horticultural Crops and their Management -I	2	0	0	2
8.	20017500	Diseases of Field and Horticultural Crops and their Management -I Lab	0	0	2	1
9.	20017600	Crop Improvement-I (<i>Kharif Crops</i>)	1	0	0	1
10.	20017700	Crop Improvement-I Lab (<i>Kharif Crops</i>)	0	0	2	1
11.	20017800	Food Safety & standards	2	0	0	2

12.	20017900	Food Safety & standards Lab	0	0	2	1
13.	20018200	Practical Crop Production – I (<i>Kharif</i> crops)	0	0	4	2
14.	20018300	Intellectual Property Rights	1	0	0	1
15.	-	Elective -II	2	0	0	2
16.	-	Elective - II Lab	0	0	2	1
17.	20018400	Ability and Skill Enhancement -V	2	0	0	2
18.	20018500	Summer Internship and Report	0	0	8	4
19.	99002800	Workshops & Seminars	-	-	-	1
20.	99002700	Human Values & Social Service/NCC/NSS	-	-	-	1
Total			16	0	26	31

Electives

Elective	Course Code	Course Name
Elective II	20018600	Geoinformatics and Nano-technology and Precision Farming
	20018700	Geoinformatics and Nano-technology and Precision Farming Lab
	20018800	Farming System & Sustainable Agriculture
	20018900	Weed Management
	20019000	Weed Management Lab
	20019100	Micro propagation Technologies
	20019200	Micro propagation Technologies Lab
	20018000	Bio pesticides & Bio fertilizers
	20018100	Bio pesticides & Bio fertilizers

Semester- VI

S. No.	Course Code	Course Name	L	T	P	Credits
1.	20019300	Rainfed Agriculture & Watershed Management	1	0	0	1
2.	20019400	Rainfed Agriculture & Watershed Management lab	0	0	2	1
3.	20019500	Protected Cultivation and Secondary Agriculture	1	0	0	1
4.	20019600	Protected Cultivation and Secondary Agriculture lab	0	0	2	1
5.	20026900	Diseases of Field and Horticultural Crops and their Management-II	2	0	0	2
6.	20027000	Diseases of Field and Horticultural Crops and their Management-II Lab	0	0	2	1

7.	20019900	Post-harvest Management and Value Addition of Fruits and Vegetables	1	0	0	1
8.	20020000	Post-harvest Management and Value Addition of Fruits and Vegetables lab	0	0	2	1
9.	20020100	Management of Beneficial Insects	1	0	0	1
10.	20020200	Management of Beneficial Insects lab	0	0	2	1
11.	20020300	Crop Improvement-II (Rabi crops)	1	0	0	1
12.	20020400	Crop Improvement-II (Rabi crops) Lab	0	0	2	1
13.	20020500	Practical Crop Production -II (Rabi crops)	0	0	4	2
14.	20020600	Principles of Organic Farming	1	0	0	1
15.	20020700	Principles of Organic Farming lab	0	0	2	1
16.	20020800	Farm Management, Production & Resource Economics	1	0	0	1
17.	20020900	Farm Management, Production & Resource Economics Lab	0	0	2	1
18.	20021000	Principles of Food Science and Nutrition	2	0	0	2
19.	-	Elective III	2	0	0	2
20.	-	Elective III Lab	0	0	2	1
21.	20021100	Ability and Skill Enhancement VI	2	0	0	2
22.	99002800	Workshops & Seminars	-	-	-	1
23.	99002700	Human Values & Social Service/NCC/NSS	-	-	-	1
Total			15	0	22	28

Elective	Course Code	Course Name
Elective III	20021200	Hi-tech. Horticulture
	20021300	Hi-tech. Horticulture Lab
	20021400	Protected Cultivation
	20021500	Protected Cultivation Lab
	20021600	System Simulation and Agro-advisory
	20021700	System Simulation and Agro-advisory Lab
	20021800	Agricultural Journalism
	20021900	Agricultural Journalism Lab

Semester – VII

Rural Agricultural Work Experience and Agro-industrial Attachment (RAWE & AIA)

Rural Agricultural Work Experience (RAWE)

Rural Agricultural Work Experience (RAWE) is included in the programme, where students will be exposed to rural (Village) environment for strengthening practical training 4-5 students in a group will be associated to farmers, Agro-industrial units and Agricultural Research Centre for this purpose for a period of 3-4 months. They will be constantly supervised and evaluated by the faculty and a detailed report of the survey and works of the students for the same period has to be submitted by him/her. For RAWE student can choose any one area as mentioned below:

Total Credits = 26

Activities	No. of weeks	Credit Hours
Rural Agricultural Work Experience and Agro-industrial Attachment (RAWE & AIA)		14
READY-Component-I		
RAWE- 411 (Rural Agricultural Work Experience)		
1. General orientation & On campus training by different faculties	1	
2. (a) Village attachment training programme	8	
i. Orientation and Survey of Village		
ii. Agronomical Interventions		
iii. Plant Protection Interventions		
iv. Soil Improvement Interventions (Soil sampling and testing)		
v. Fruit and Vegetable production interventions		
vi. Food Processing and Storage interventions		
vii. Animal Production Interventions		
viii. Extension and Transfer of Technology activities		
(b) Attachment in University/College/KVK/research Station	5	

READY- Component -II		
AIA- 412 (Agro Industrial Attachment)		
<ul style="list-style-type: none"> • 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. 	3	4
Plant Clinic <ul style="list-style-type: none"> • Seed/Sampling production, Pesticide/insecticide, post-harvest industries, processing- value addition, Agri -finance institutions etc. 	2	2
Activities and Tasks during Agro-Industrial Attachment Programme		
i. Acquaintance with industry and staff		
ii. Study of structure, functioning, objective and mandates of the industry		
iii. Study of various processing units and hands-on trainings under supervision of industry staff		
iv. Ethics of industry		
v. Employment generated by the industry		
vi. Contribution of the industry promoting environment		
vii. Learning business network including outlets of the industry		
viii. Skill development in all crucial tasks of the industry		
ix. Documentation of the activities and task performed by the students		
x. Performance evaluation, appraisal and ranking of students		
Summer Internship & Project Report		4
RAWE-1 & RAWE-2 (Agro Industry /Rural Development etc) Program & Report		2
Total		26

READY- Component –II

Case Study of Agro Industry Attachment

1. Topic/ title of case study.
2. Student name/ ID No.
3. Name of Instructor/Supervisor/Designation.
4. Department/Section
5. Detail of Agro Industry Promoter/Place/Address of Industry
6. Relevance of case study
7. Objective of case study
8. Functioning of Agro Industry/Structure of Industry/type of technology used/type of machinery used
9. Case study out put
10. Future prospects of case study & suggestions
11. Recommendations for beneficiaries/farmers about case study
12. References/Appendices.

Semester VIII

READY- Component III (Experiential Learning Programme) Modules for Skill Development and Entrepreneurship

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

Course Code	Title of the module	Department	Credits
20022000	Production Technology for Bioagents & Biofertilizer	Soil Science & Agricultural Chemistry & Plant pathology	0+10
20022100	Seed Production, Processing and Technology	Seed Science & Technology	0+10
20022200	Mushroom Cultivation Technology	Plant Pathology	0+10
20022300	Commercial Beekeeping	Entomology	0+10
20022400	Commercial Horticulture	Horticulture	0+10
20022500	Agriculture Waste Management	Agronomy	0+10
20022600	Organic Crop Production Technology	Agronomy	0+10

20022700	Value addition in Milk	Animal Husbandry	0+10
20022800	Micro Propagation	Horticulture	0+10
20022900	Poultry Production Technology	Animal Husbandry	0+10

Project Preparation Modules for Experiential Learning/Hands of Training

1. Project Title.
2. Student name/ ID No.
3. Department/Section
4. Name of Guide/Instructor/Supervisor/Designation/Department
5. Justification/Relevance of Project
6. Project Activities/Methodologies
7. Project of Output/results
8. Summary & Conclusion
9. Future prospects of case study & suggestions
10. References
11. Appendices.

EVALUATION SCHEME- THEORY

The evaluation of the theory paper of B.Sc. (Agriculture) would be based on Internal and External Assessments. Internal Assessment would consist of 50% of the marks (50 marks) and external assessment (in form of End Term Exam) would consist of remaining 50% marks (50 marks). Detailed scheme of Internal and External Assessments as follows:

Internal Assessment - Semester I

Type	Details	Marks
Mid Term	One Mid-term Sessional	25
Marks obtained in various Tests, Assignments, Presentations, Quiz, Tutorials, etc.	Average of marks obtained	20
Attendance	75% + : 5 marks	5
TOTAL	50	

Internal Assessment- Semester II to VI

The distribution of Internal Assessment Marks is as follows:

Type	Details	Marks
Mid Term	Two Mid-term Sessional of 15 marks each (15+15)	30
Marks obtained in various Tests, Assignments, Presentations, Quiz, Tutorials, etc.	Average of marks obtained	15
Attendance	75%+ : 5 marks	5
TOTAL	50	

External Assessment

Type	Marks
Theory	50

EVALUATION SCHEME -PRACTICAL

The evaluation of the practical paper of B.Sc. (Agriculture) would be based on Internal and External Assessments. Internal Assessment would consist of 50% of the marks (50 marks) and external assessment (in form of End Term Exam) would consist of remaining 50% marks (50 marks). Detailed scheme of Internal and External Assessment is as follows:

Internal Assessment

Type	Details	Marks
Marks obtained in various manuals, practical file, participation, any model prepared, output of practical	Average of marks obtained	45
Attendance	75%+ : 5 marks	5
TOTAL	50	

External Assessment

Type	Marks
Practical	50

Examination Scheme of BSc Agri VII Semester RAWE Programme

Course code	Course Name	Credit		Maximum Number
20023000	Rural Agricultural Work Experience and Agro-industrial Attachment (RAWE)	14		700
	A. General orientation & On campus training by different faculties		50	
	B. Village attachment training program		400	
	C. Attachment in University/College/KVK/research Station		250	
20023100	Agro Industrial Attachment	4		200
20023200	Plant Clinic	2		100
20023300	Summer Internship /Agro Industry/Rural Development Program & Report	6		300
	Total	26		1300

Examination Scheme of B SC AG VIII

Module- I		Module- II		
10		10		20 (Total Credit)
Project Presentation (250)	Project File & Project Details (250)	Project Presentation (250)	Project File & Project Details (250)	Total (1000)

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