

**B. Sc. (Hons) Agriculture**  
**Semester wise Course Layout**

**Semester-I**

Course No.	Courses	Credits		
		Total	T	P
<b>A)</b>	<b>Core courses</b>			
AGRO 111	Fundamentals of Agronomy-I	2	1	1
AGRO 112	Introductory Agro-meteorology and Climate change	2	1	1
AHDS 111	Livestock Production & Management	2	1	1
EXTN 111	Rural Sociology & Educational Psychology	2	2	0
HORT 111	Fundamentals of Horticulture	2	1	1
LANG 111	Comprehension & Communication Skills in English	2	1	1
MIBO 111	Introductory Microbiology	2	1	1
SSAC 111	Fundamentals of Soil Science	3	2	1
	<b>Total Core courses</b>	<b>17</b>	<b>10</b>	<b>7</b>
<b>B)</b>	<b>Remedial Courses (3 or 4 credit)</b>			
AGH 111	Agricultural Heritage	1	1	0
BIO 111	Introductory biology	2	1	1
MATH 111	Elementary Mathematics	2	2	0
	<b>Sub total</b>	<b>3</b>	<b>2/3</b>	<b>0/1</b>
<b>c)</b>	<b>Non-Gradial Courses (3 credits)</b>			
HVE 111	Human Values & Ethics	1	1	0
NCC 111/ NSS 111	NCC/ NSS	1	1	0
PEY 111	Phy Edn& Yoga	1	1	0
	<b>Sub total</b>	<b>3</b>	<b>3</b>	<b>0</b>
	<b>Total Credits (A+B+C)</b>	<b>23/24</b>	<b>15/16</b>	<b>7/8</b>

**Semester -II**

Course No.	Courses	Credits		
		Total	T	P
<b>A)</b>	<b>Core Course</b>			
AGRO-123	Fundamentals of Agronomy-II	2	1	1
BOT 121	Fundamentals of Crop Physiology	2	1	1
ECON 121	Fundamentals of Agricultural Economics	2	2	0
ENGG 121	Soil and Water Conservation Engineering	2	1	1
ENTO-121	Fundamentals of Entomology	2	1	1
EXTN 122	Fundamentals of Agricultural Extension Education	3	2	1
GPB 121	Fundamentals of Genetics	3	2	1
PATH 121	Fundamentals of Plant Pathology	3	2	1
	<b>Total</b>	<b>19</b>	<b>12</b>	<b>7</b>
<b>B)</b>	<b>Non-gradial course</b>			
FRST 121	<del>Introduction</del> to Forestry	2	1	1
	Educational Tour	1	0	1
	<b>Subtotal</b>	<b>3</b>	<b>1</b>	<b>2</b>
<b>C)</b>	<b>Common Course</b>			
EXTN 123	Communication Skills and personality Developments	2	1	1
	<b>Subtotal</b>	<b>2</b>	<b>1</b>	<b>1</b>
	<b>Total Credits (A+B+C)</b>	<b>24</b>	<b>14</b>	<b>10</b>

### Semester III

Course No.	Courses	Credit		
		Total	T	P
<b>A)</b>	<b>Core Course</b>			
AGRO-234	Crop Production Technology-I (Kharif crops)	2	1	1
AGRO-235	Rainfed Agriculture and Watershed Management	2	1	1
BIOCHM-231	Fundamentals of plant biochemistry and biotechnology	3	2	1
ENGG 232	Farm Machinery and Power	2	1	1
ENTO- 232	Insect Ecology and Integrated pest Management	2	1	1
GPB 232	Fundamentals of Plant Breeding	2	1	1
HORT 232	Production Technology for Vegetables and Spices	2	1	1
PATH 232	Principles of Integrated Disease Management	2	1	1
STAT 231	Statistical Methods	2	1	1
	<b>Subtotal</b>	<b>19</b>	<b>10</b>	<b>9</b>
<b>B)</b>	<b>Common Courses</b>			
COMP 231	Agri- Informatics	2	1	1
EVS 231	Environmental Studies and Disaster Management	3	2	1
	<b>Subtotal</b>	<b>5</b>	<b>3</b>	<b>2</b>
	<b>Total Credits (A+B)</b>	<b>24</b>	<b>13</b>	<b>11</b>

**Semester IV**

Course No.	Courses	Credit		
		Total	T	P
<b>A)</b>	<b>Core Course</b>			
AGRO-246	Crop Production Technology-II (Rabi crops)	2	1	1
AGRO-247	Farming System and Sustainable Agriculture	1	1	0
AGRO-248	Principles of Organic Farming	2	1	1
AHDS 242	Livestock Breeding and Nutrition	2	1	1
ECON 242	Agriculture Finance and Cooperation	3	2	1
ENGG 243	Renewable Energy and Green Technology	2	1	1
ENTO-243	Pest of Horticultural Crops and their Management	2	1	1
GPB 243	Principles of Seed Technology	3	1	2
HORT 244	Production Technology for Fruit and Plantation Crops	2	1	1
SSAC 242	Problematic Soils and their Management	2	1	1
	<b>Subtotal</b>	<b>21</b>	<b>11</b>	<b>10</b>
<b>B)</b>	<b>Elective Courses (3 credits)</b>			
ELE BOT 242	Micropropagation Technologies	3	1	2
ELE EXTN 244	Agricultural Journalism	3	2	1
ELE GPB 244	Commercial Plant breeding	3	1	2
ELE PATH 243	Bio-fertilizers, Bio-control Agents and Bio-pesticides	3	2	1
	<b>Subtotal Elective</b>	<b>3</b>	<b>2</b>	<b>1</b>
	<b>Total Credits (A+B)</b>	<b>24</b>	<b>13</b>	<b>11</b>

**Semester V**

Course No.	Courses	Credit		
		Total	T	P
<b>A)</b>	<b>Core Course</b>			
AGRO-359	Practical Crop Production-I (Kharif crops)	1	0	1
AHDS 353	Sheep Goat and Poultry Production	2	1	1
BOT 353	Intellectual Property Right	1	1	0
ECON 353	Agricultural Marketing Trade and Prices	3	2	1
ENTO 354	Pests of Crops and Stored Grain and their Management- I	2	1	1
GPB 355	Crop Improvement – I (Kharif Crops)	2	1	1
HORT 354	Production Technology for Ornamental Crops, MAP and Landscaping	2	1	1
PATH 354	Diseases of Field and Horticultural Crops and their Management	3	2	1
SSAC 353	Manures, Fertilizers and Soil Fertility Management	3	2	1
	<b>Subtotal</b>	<b>19</b>	<b>11</b>	<b>8</b>
<b>B)</b>	<b>Common Courses</b>			
EXTN 355	Entrepreneurship Development and Business Communication	2	1	1
	<b>Subtotal</b>	<b>2</b>	<b>1</b>	<b>1</b>
<b>C)</b>	<b>Elective Course (3 credits)</b>			
AGRO-3510	Weed Management	3	2	1
ELE ECON 354	Agribusiness Management	3	2	1
ELE FST 351	Food Safety and Standards	3	2	1
ELE HORT 355	Protected Cultivation	3	2	1
	<b>Subtotal</b>	<b>3</b>	<b>2</b>	<b>1</b>
	<b>Total (A+B+C)</b>	<b>24</b>	<b>14</b>	<b>10</b>

### Semester VI

Course No.	Courses	Credit		
		Total	T	P
<b>A)</b>	<b>Core Course</b>			
AGRO 3611	Practical Crop Production-II(Rabi crops)	1	0	1
AGRO 3612	Geo-informatics and Nano-technology and Precision Farming	2	1	1
AHDS 364	Technology of Milk and Milk Products.	2	1	1
ECON 365	Farm Management, Production and Resource Economics	2	1	1
ENGG 364	Protected Cultivation and secondary Agriculture	2	1	1
ENTO 365	Management of Beneficial Insects	2	1	1
FST 362	Principles of Food Science and Nutrition	2	2	0
GPB 366	Crop Improvement – II (Rabi crops)	2	1	1
HORT 366	Post-harvest Management and Value Addition of Fruits and Vegetables	2	1	1
PATH 365	Diseases of Field and Horticultural Crops and their Management-II	3	2	1
	<b>Subtotal</b>	<b>20</b>	<b>11</b>	<b>9</b>
<b>B)</b>	<b>Elective courses (Any one)</b>			
ELE AGM 361	System Stimulation and Agro-advisory	3	2	1
ELE HORT 368	Hi tech Horticulture	3	2	1
ELE HORTI-367	Landscaping	3	2	1
ELE SSAC 364	Agrochemicals	3	2	1
	<b>Subtotal</b>	<b>3</b>	<b>2</b>	<b>1</b>
	<b>Total (A+B)</b>	<b>23</b>	<b>13</b>	<b>10</b>

## Semester VII

### RAWE& AIA Programme

#### **Rural Agricultural Work Experience and Agro-industrial Attachment**

<b>Sr. No.</b>	<b>Activities</b>	<b>Number of weeks</b>	<b>Credits</b>
1	General orientation and On campus training by different faculties	1	1
2	Village attachment/ Unit attachment in Univ./ College. KVK/ Research Station	8	8
3	Agro-Industrial Attachment	10	10
4	Project Report Preparation, Presentation and Evaluation	1	1
<b>Total weeks for RAWE and AIA</b>		<b>20</b>	<b>20</b>

- **Agro- Industrial Attachment:** The students would be attached with the agro-industries for a period of 10 weeks to get an experience of the industrial environment and working.

## Semester VIII

### Experiential Learning Modules

Sr. No.	Course No.	Credits	Course Title
1	ELM AGRO4813	10(0+10)	Organic Farming Production Technology
2	ELM AGRO 4814	10(0+10)	Commercial production of organic inputs
3	ELM AHDS 4810	10(0+10)	Processing of Milk and Milk Product
4	ELM AHDS 489	10(0+10)	Poultry production
5	ELM BOT 481	10(0+10)	Seed Production and Technology
6	ELM BOT 484	10(0+10)	Tissue culture
7	ELM ENGG 481	10(0+10)	Natural Water Resource Management
8	ELM ENTO 487	10(0+10)	Bio-agents and Bio-pesticides
9	ELM ENTO 488	10(0+10)	Commercial Beekeeping
10	ELM ENTO 489	10(0+10)	Silkworm cocoon production technology
11	ELM HORT 489	10(0+10)	Commercial Horticulture
12	ELM HORT 4810	10(0+10)	Floriculture and Landscaping Gardening
13	ELM HORT 4811	10(0+10)	Nursery Management of Horticultural Crops (Proposed)
14	ELM HORT 4812	10(0+10)	Commercial Vegetable Production (Proposed)
15	ELM HORT 4813	10(0+10)	Protected Cultivation of Flowers and Vegetables (Proposed)
16	ELM HORT 4814	10(0+10)	Post-harvest Management and Valise Additions of Horticultural Crops
17	ELM PATH 486	10(0+10)	Mushroom Production
18	ELM SSAC 485	10(0+10)	Soil, Water, Plant and Fertilizer Analysis
19	ELM SSAC 486	10(0+10)	Agricultural Waste Management

This program will be undertaken by the students preferably during the eighth semester for a total duration of **24 weeks** with a weightage of **0+20** credit hours. The students will register for any of two modules, listed as above, of **0+10** credit hours each.



**Department wise list of courses**

**Agronomy**

<b>Sr. No.</b>	<b>Semester</b>	<b>Course No.</b>	<b>Credits</b>	<b>Course Title</b>
1	I	AGRO 111	2(1+1)	Fundamentals of Agronomy-I
2	I	AGRO 112	2(1+1)	Introductory Agro-meteorology and Climate change
3	II	AGRO 123	2(1+1)	Fundamentals of Agronomy-II
4	III	AGRO 234	2(1+1)	Crop Production Technology-I (Kharif crops)
5	III	AGRO 235	2(1+1)	Rainfed Agriculture and Watershed Management
6	IV	AGRO 246	2(1+1)	Crop Production Technology-II (Rabi crops)
7	IV	AGRO 247	1(1+0)	Farming System and Sustainable Agriculture
8	IV	AGRO 248	2(1+1)	Principles of Organic Farming
9	V	AGRO 359	1(0+1)	Practical Crop Production-I (Kharif crops)
10	V	ELE AGRO 3510	3(2+1)	Weed Management
11	VI	AGRO 3611	1(0+1)	Practical Crop Production-II (Rabi crops)
12	VI	AGRO 3612	2(1+1)	Geo-informatics and Nano-technology and Precision Farming
13	VIII	ELM AGRO 4813	10(0+10)	Organic Farming Production Technology
14	VIII	ELM AGRO 4814	10(0+10)	Commercial production of organic inputs (Proposed)
<b>Total Credits</b>			<b>42(11+31)</b>	

**Botany (Genetics and Plant Breeding, Physiology and Seed Technology)**

<b>Sr. No.</b>	<b>Semester</b>	<b>Course No.</b>	<b>Credits</b>	<b>Course Title</b>
1	II	GPB 121	3(2+1)	Fundamentals of Genetics
2	II	BOT 121	2(1+1)	Fundamentals of Crop Physiology
3	III	GPB 232	2(1+1)	Fundamentals of Plant Breeding
4	IV	GPB 243	3(2+1)	Principles of Seed Technology
5	IV	ELE GPB 244	3(2+1)	Commercial Plant breeding
6	IV	ELE BOT 242	3(1+2)	Micropropagation Technologies
7	V	GPB 355	2(1+1)	Crop Improvement – I (Kharif Crops)
8	V	BOT 353	1(1+0)	Intellectual Property Right
9	VI	GPB 366	2(1+1)	Crop Improvement – II (Rabi crops )
10	VIII	ELM BOT 481	10(0+10)	Seed production and Technology
11	VIII	ELM.BOT 482	10=0+10	Tissue culture Technologies
<b>Total</b>			<b>41(12+29)</b>	

### Agril. Entomology

Sr. No.	Semester	Course No.	Credits	Course Title
1	II	ENTO 121	2(1+1)	Fundamentals of Entomology
2	III	ENTO 232	2(1+1)	Insect Ecology and Integrated pest Management
3	IV	ENTO 243	2(1+1)	Pest of Horticultural Crops and their Management
4	V	ENTO 354	2(1+1)	Pests of Crops and Stored Grain and their Management
5	VI	ENTO 365	2(1+1)	Management of Beneficial Insects
5	VIII	ELM ENTO 486	10(0+10)	Mass Production of Bioagents and Biopesticides
6	VIII	ELM ENTO 487	10(0+10)	Commercial Bee Keeping
7	VIII	ELM ENTO 488	10(0+10)	Silkworm Cocoon Production Technology
<b>Total</b>			<b>40(5+35)</b>	

### Horticulture

Sr. No.	Semester	Course No.	Credits	Course Title
1	I	HORT 111	2(1+1)	Fundamentals of Horticulture
2	III	HORT 232	2(1+1)	Production Technology for Vegetables and Spices
3	IV	HORT 243	2(1+1)	Production Technology for Fruit and Plantation Crops
4	V	HORT 354	2(1+1)	Production Technology for Ornamental Crops, MAP and Landscaping
5	V	ELE HORT 355	3(2+1)	Protected cultivation of horticultural crops
6	VI	HORT 366	2(1+1)	Post-harvest Management and Value Addition of Fruits and Vegetables
7	VI	ELE HORT 367	3(2+1)	Landscaping
8	VI	ELE HORT 368	3(2+1)	Hi-tech Horticulture
9	VIII	ELM HORT 489	10(0+10)	Commercial Horticulture
10	VIII	ELM HORT 4810	10(0+10)	Floriculture and Landscape Gardening
11	VIII	ELM HORT 4811	10(0+10)	Nursery Management of Horticultural Crops (Proposed)
12	VIII	ELM HORT 4812	10(0+10)	Commercial Vegetable Production (Proposed)
13	VIII	ELM HORT 4813	10(0+10)	Protected Cultivation of Flowers and Vegetables (Proposed)
14	VIII	ELM HORT	10(0+10)	Post-harvest Management and Value

		4814		Additions of Horticultural Crops (Proposed)
<b>Total</b>			<b>79(11+68)</b>	

### Agricultural Economics

Sr. No.	Semester	Course No.	Credits	Course Title
1	II	ECON 121	2(2+0)	Fundamentals of Agricultural Economics
2	IV	ECON 242	3(2+1)	Agricultural Finance and Cooperation
3	V	ECON 353	3(2+1)	Agricultural Marketing Trade and Prices
4	V	ELE ECON 354	3(2+1)	Agribusiness Management
5	VI	ECON 365	2(1+1)	Farm Management, Production and Resource Economics
<b>Total</b>			<b>13(9+4)</b>	

### Agricultural Extension Education

Sr. No.	Semester	Course No.	Credits	Course Title
1	I	EXTN 111	2(2+0)	Rural Sociology & Educational Psychology
2	II	EXTN 122	3(2+1)	Fundamentals of Agricultural Extension Education
3	II	EXTN 123	2(1+1)	Communication Skills and personality Developments (Common Course)
4	IV	ELE EXTN 244	3(2+1)	Agricultural Journalism
5	V	EXTN 355	2(1+1)	Entrepreneurship Development and Business Communication (Common Course)
<b>Total</b>			<b>12(8+4)</b>	

### Agril. Engineering

Sr. No.	Semester	Course No.	Credits	Course Title
1	II	ENGG 121	2(1+1)	Soil and Water Conservation Engineering
2	III	ENGG 232	2(1+1)	Farm Machinery and Power
3	IV	ENGG 243	2(1+1)	Renewable Energy and Green Technology
4	VI	ENGG 364	2(1+1)	Protected Cultivation and secondary Agriculture
5	VIII	ELM ENGG 485	10(0+10)	Natural Resources Management
<b>Total</b>			<b>18 (4+14)</b>	

**Plant Pathology**

Sr. No.	Semester	Course No.	Credits	Course Title
1	I	MIBO 111	2(1+1)	Introductory Microbiology
2	II	PATH 121	3(2+1)	Fundamentals of Plant Pathology
3	II	PATH 232	2(1+1)	Principles of Integrated Disease Management
4	IV	ELE PATH 243	3(2+1)	Biofertilizers, biocontrol agents and biopesticides
5	V	PATH 354	3(2+1)	Diseases of Field and Horticultural Crops and their Management – I
6	VI	PATH 365	3(2+1)	Diseases of Field and Horticultural Crops and their Management-II
7	VIII	ELM PATH 486	10(0+10)	Mushroom Cultivation Technologies
<b>Total</b>			<b>26(10+16)</b>	

**Soil Science and Agril. Chemistry**

Sr. No.	Semester	Course No.	Credits	Course Title
1	I	SSAC 111	3(2+1)	Fundamentals of Soil Science
2	IV	SSAC 242	2(1+1)	Problematic Soils and their Management
3	V	SSAC 353	3(2+1)	Manures, Fertilizers and Soil Fertility Management
4	VI	ELE SSAC 364	3(2+1)	Agrochemicals
5	VIII	ELM SSAC 485	10(0+10)	Soil, Water, Plant and Fertilizer Analysis
6	VIII	ELM SSAC 486	10(0+10)	Agricultural Waste Management
<b>Total</b>			<b>31(7+24)</b>	

**Animal Husbandry and Dairy science**

Sr. No.	Semester	Course No.	Credits	Course Title
1	I	AHDS-111	1+1=2	Livestock Production and Management
2	IV	AHDS-242	1+1=2	Livestock Breeding and Nutrition
3	V	AHDS-353	1+1=2	Sheep, Goat and Poultry Production
4	VI	AHDS-364	1+1=2	Technology of Milk and Milk Products
5	VIII	ELM AHDS 485	(0+10)=10	Poultry Production
6	VIII	ELM AHDS 486	(0+10)=10	Processing of Milk and Milk Products
<b>Total</b>			<b>4+24=28</b>	

**Other courses**

<b>Sr. No.</b>	<b>Semester</b>	<b>Course No.</b>	<b>Credits</b>	<b>Course Title</b>
1	I	LANG 111	2(1+1)	Comprehension & Communication Skills in English
2	III	STAT 231	2(1+1)	Statistical Methods
3	III	BIOCHM 231	3(2+1)	Fundamentals of plant biochemistry and biotechnology
6	V	ELE FST 351	3(2+1)	Food Safety and Standards (Elective)
7	VI	FST 362	2(2+0)	Principles of Food Science and Nutrition
8	VI	ELE AGM 361	3(2+1)	System Stimulation and Agro-advisory
9	VIII	ELM FST 483	10(0+10)	Food Processing
		<b>Total</b>	<b>25(10+15)</b>	

#### **Common Courses**

<b>Sr. No.</b>	<b>Semester</b>	<b>Course No.</b>	<b>Credits</b>	<b>Course Title</b>
1	III	EVS 231	3(2+1)	Environmental Studies and Disaster Management
2	II	EXTN 123	2(1+1)	Communication skills and personality Development
3	V	EXTN 355	2(1+1)	Entrepreneurship Development and Business Management
4	III	COMP 231	2(1+1)	Agri-Informatics
		<b>Total</b>	<b>9(5+4)</b>	