



**B.Sc. (HONS.) (AGRICULTURE)**  
**PROGRAM SCHEME**  
**School of Agriculture,**  
**ITM University, Gwalior, Madhya Pradesh 474001**

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# **SCHEME OF THE PROGRAM**

## Semester I

SN	Course Code	Title of the Course	TEACHING SCHEME			CREDITS	CONTACTS HRS/WK
			L	T	P		
1	HORT-111	Fundamentals of Horticulture	1	0	1	2	3
2	BIOCHEM-BT-111	Fundamentals of Plant Biochemistry and Biotechnology	2	0	1	3	4
3	SS-111	Fundamentals of Soil Science	2	0	1	3	4
4	AGRON -111	Fundamentals of Agronomy	3	0	1	4	5
5	AGRON-113	Introduction to Forestry	1	0	1	2	3
6	AEXT-111	Rural Sociology and Educational Psychology	2	0	0	2	2
7	ENGL 111	Comprehension and Communication Skills in English	1	0	1	2	3
8	AGRON -112	Agriculture Heritage*	1	0	0	1	1
9a	CP-111	Introductory Biology*	1	0	1	2	3
9b	STAT-111	Elementary Mathematics*	2	0	0	2	2
10	AEXT 112	Human Values and Ethics**	1	0	0	1	1
11a	NSS-111	National Service Scheme**	0	0	2	2	4
11b	PED-111	Physical Education and Yoga Practices**	0	0	2	2	4
11c	BNCC01GE03	National Cadet Corps I**	1	0	1	2	3
12	GSDS-111	Socialism in India: Yesterday, Today and Tomorrow	1	0	0	1	1
Total Credits		19 (13+6)+03*+03**					
<p><i>Note: *R: Remedial course; **NC: Non-gradual courses, respectively.</i></p> <p><sup>1</sup>From CP-111 and STAT-111, students of Biology Group have to take STAT-111, whereas students from Mathematics Group have to take CP-111, while students who had both biology and math in 12 class have to opt any one of their choice</p> <p><sup>2</sup>From NSS-111/ PED-111 BNCC01GE03, students have to select any one of their choice.</p>							

## Semester II

SN	Course Code	Title of the Course	TEACHING SCHEME			CREDITS	CONTACTS HRS/WK
			L	T	P		
1	GPB-121	Fundamentals of Genetics	2	0	1	3	4
2	MICROB- 121	Agricultural Microbiology	1	0	1	2	3
3	AENG-121	Soil and Water Conservation Engineering	1	0	1	2	3
4	CP-121	Fundamentals of Crop Physiology	1	0	1	2	3
5	AE-121	Fundamentals of Agricultural Economics	2	0	0	2	2
6	PP-121	Fundamentals of Plant Pathology	3	0	1	4	5
7	ENT-121	Fundamentals of Entomology	3	0	1	4	5
8	AEXT-121	Fundamentals of Agricultural Extension Education	2	0	1	3	4
9	AEXT-122	Communication Skills and Personality Development	1	0	1	2	3
10	BNCC02GE03	National Cadet Corps II*	0	0	2	2	4
Total Credits		<b>24(16+8), Note: *denoting Open Elective Course</b>					

## Semester III

SN	Course Code	Title of the Course	TEACHING SCHEME			CREDITS	CONTACTS HRS/WK
			L	T	P		
1	AGRON- 211	Crop Production Technology - I ( <i>Kharif crops</i> )	1	0	1	2	3
2	GPB- 211	Fundamentals of Plant Breeding	2	0	1	3	4
3	AE-211	Agricultural Finance and Co-operation	2	0	1	3	4
4	STAT-211	Agri- Informatics	1	0	1	2	3
5	AENG-211	Farm Machinery and Power	1	0	1	2	3
6	HORT- 211	Production Technology for Vegetables and Spices	1	0	1	2	3
7	STAT-211	Statistical Methods	1	0	1	2	3
8	CP-211	Environmental Studies and Disaster Management	2	0	1	3	4
9	AHS- 211	Live-stock and Poultry Management	3	0	1	4	5
10	BNCC03GE02	National Cadet Corps III*	1	0	1	2	3
11	BNCCAMP0-GE05	NATIONAL CADET CORPS CAMP –I*	2	0	3	5	8
Total Credits		23(14+9)/ 23(14+9) +2(1+1)/ 23(14+9) +5 (2+3), Note: *E: Elective Course					

## Semester IV

SN	Course Code	Title of the Course	TEACHING SCHEME			CREDITS	CONTACTS HRS/WK
			L	T	P		
1	AGRON- 221	Crop Production Technology - II (Rabi crops)	1	0	1	2	3
2	AENG-221	Renewable Energy and Green Technology	1	0	1	2	3
3	HORT- 221	Production Technology for Ornamental Crops, MAP and Landscaping	1	0	1	2	3
4	SS- 221	Problematic Soils and their Management	2	0	0	2	2
5	HORT-221	Production Technology for Fruit and Plantation Crops	1	0	1	2	3
6	GPB- 221	Principles of Seed Technology	1		2	3	5
7	AGRON- 222	Farming System & Sustainable Agriculture	1	0	0	1	1
8	AE- 221	Agricultural Marketing, Trade and Prices	2	0	1	3	4
9	AGRON-223	Introductory Agro-meteorology & Climate Change	1	0	1	2	3
10	EDUT - 200	Education Tour **	0	0	2	2	4
11a	ELCT-FST-221	Processing Technology of Cereals *	2	0	1	3	4
11b	ELCT- GPB-221	Micro propagation Technologies *	1	0	2	3	5
11c	ELCT-HORT-221	Hi-tech. Horticulture *	2	0	1	3	4
11d	ELCT-AE-221	Agribusiness Management *	2	0	1	3	4
11e	ELCT-AGRON-221	Weed Management *	2	0	1	3	4
11f	ELCT-AENG-221	Remote Sensing and GIS Applications *	2	0	1	3	4
12	BNCC04GE03	National Cadet Corps IV*	2	0	1	3	4
Total Credits		19(11+8) + 3* +2**					
Note: * E: Elective Courses, ** NC: Nongradial Course <sup>1</sup> From Sr. No. 11a to 11f, students have to opt any one of their choice							

## Semester V

SN	Course Code	Title of the Course	TEACHING SCHEME			CREDITS	CONTACTS HRS/WK
			L	T	P		
1	AGRON- 312	Practical Crop Production-I (Kharif Crops)	0	0	2	2	4
2	PP- 312	Principles of Integrated Pest and Disease Management	2	0	1	3	4
3	SS- 311	Manures, Fertilizers and Soil Fertility Management	2	0	1	3	4
4	ENT-311	Pests of Crops and Stored Grain and their Management	2	0	1	3	4
5	PP- 311	Diseases of Field and Horticultural Crops and their Management -I	2	0	1	3	4
6	GPB- 311	Crop Improvement-I (Kharif Crops)	1	0	1	2	3
7	AEXT- 311	Entrepreneurship Development and Business Communication	1	0	1	2	3
8	AGRON- 311	Geoinformatics and Nano-technology and Precision Farming	1	0	1	2	3
9	GPB- 312	Intellectual Property Rights	1	0	0	1	1
10a	ELCT-FST-311	Processing Technology of Fruits and Vegetables	2	0	1	3	4
10b	ELCT- GPB-311	Commercial Plant Breeding	1	0	2	3	5
10c	ELCT-HORT-311	Landscaping	2	0	1	3	4
10d	ELCT-AE-311	Agricultural Journalism	2	0	1	3	4
10e	ELCT-ENT-311	Biopesticides & Biofertilizers	2	0	1	3	4
10f	ELCT-AENG-311	Artificial Intelligence	3	0	0	3	3
11	BNCC05GE02	National Cadet Corps V	2	0	3	5	8
<b>Total Credits</b>		<b>21(12+09) + 3*/21(12+09) + 5*</b>					
Note: * E: Elective Courses, <sup>1</sup> From Sr. No. 10a to 10f , students have to opt any one of their choice							

## Semester VI

SN	Course Code	Title of the Course	TEACHING SCHEME			CREDITS	CONTACTS HRS/WK
			L	T	P		
1	AGRON-323	Practical Crop Production-II ( <i>Rabi Crops</i> )	0	0	2	2	4
2	AGRON-321	Rainfed Agriculture and Watershed Management	1	0	1	2	3
3	AENG-321	Protected Cultivation and Secondary Agriculture	1	0	1	2	3
4	PP-321	Diseases of Field and Horticultural Crops and their Management - II	2	0	1	3	4
5	HORT-321	Post-harvest Management and Value Addition of Fruits and Vegetables	1	0	1	2	3
6	ENT-321	Management of Beneficial insects	1	0	1	2	3
7	GPB- 321	Crop Improvement-II ( <i>Rabi Crops</i> )	1	0	1	2	3
8	AGRON-322	Principles of Organic Farming	1	0	1	2	3
9	AE-321	Farm Management, Production and Resource Economics	1	0	1	2	3
10	BIOCHEM-BT- 321	Principles of Food Science and Nutrition	2	0	0	2	2
11a	ELCT-FST-321	Food Safety and Standards	2	0	1	3	4
11b	ELCT- GPB-321	Molecular Biology	2	0	1	3	4
11c	ELCT-HORT-321	Protected Cultivation	2	0	1	3	4
11d	ELCT-AEXT-321	System Simulation and Agro-advisory	2	0	1	3	4
11e	ELCT-ENT-321	Agrochemicals	2	0	1	3	4
11f	ELCT-AENG-321	Information Technology for Land and Water Management	2	0	1	3	4
12	BNCC06GE03	National Cadet Corps VI	2	0	1	3	4
<b>Total Credits</b>			<b>21 (11 + 10) + 3*</b>				
Note: * E: Elective Courses, <sup>1</sup> From Sr. No. 11a to 11f , students have to opt any one of their choice							



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## Semester VII

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

Sr.NO.	ACTIVITIES	NO. OF WEEKS	CREDIT HOURS
1	General orientation & On campus training by different faculties	1	14
2	Village attachment	8	
	Unit attachment in Univ. / College. KVK/ Research Station Attachment	5	
3	Plant Clinic	2	02
	Agro-Industrial Attachment	3	04
4	Project Report Preparation, Presentation and Evaluation	1	-
<b>Total weeks for RAWE &amp; AIA</b>		<b>20</b>	<b>20</b>

## Semester VIII

### Experiential Learning Programme (ELP)/ Hands On Training (HOT)

Sr. No	Title of the module	Code	Credits
1	Agribusiness and Industrial Management*	ELP- ABM-401	10(0+10)
2	Industrial Training on Product Development and Marketing*	ELP- ABM-402	10(0+10)
3	Agricultural Heritage and Agritourism	ELP- ABM-403	10(0+10)
4	Agriculture Waste Management	ELP-AGRON- 401	10(0+10)
5	Organic Production Technology	ELP- AGRON-402	10(0+10)
6	Commercial Crop Production Technology (Agronomical Crops)	ELP-AGRON- 403	10(0+10)
7	Commercial Beekeeping	ELP-ENT-401	10(0+10)
8	Production Technology for Bioagents and Biofertilizer	ELP-ENT-402	10(0+10)
9	Seed Production and Technology	ELP-GPB-401	10(0+10)
10	Seed Testing and Quality Assessment	ELP-GPB-402	10(0+10)
11	Commercial Horticulture (Vegetable and Spices Crop Production)	ELP-HORT-401	10(0+10)
12	Floriculture and Landscaping	ELP- HORT-402	10(0+10)
13	Processing of Fruits and Vegetables for Value Addition	ELP- HORT-403	10(0+10)
14	Commercial Nursery Establishment and Mass Multiplication of Horticultural Crops	ELP-HORT-404	10(0+10)
15	Protected Cultivation of High Value Horticulture Crops	ELP- HORT-405	10(0+10)
16	Medicinal and Aromatic Crop Production	ELP-HORT-406	10(0+10)
17	Mushroom Cultivation Technology	ELP-PP-401	10(0+10)
18	Plant Health Diagnosis and Management	ELP-PP-402	10(0+10)
19	Soil, Plant, Water and Seed Testing	ELP-SS-401	10(0+10)
20	Agriculture Kiosk and Rural Development	ELP-AEXT-401	10(0+10)
21	Introduction Indigenous Technical Knowledge (ITK)	ELP-AEXT-402	10(0+10)
22	Integrated Fish Farming	ELP-FSC-401	10(0+10)
23	Multimedia and Graphic Designing & Production of Information Materials	ELP-JMC-401	10(0+10)
24	Processing, Preservation and Value Addition in Ornamental, Medicinal and Aromatic plants	ELP-HORT-407	10(0+10)
25	Agri-based Software Design	ELP-AENG-401	10(0+10)
26	Poultry Production Technology	ELP-AHS-401	10(0+10)
Total Credits	20(0+20) (students have to opt any two given ELP module)		

