



JOY UNIVERSITY  
semper paratus

**School of Agricultural Sciences**

**M.Sc. (Ag.) Entomology**

**I Semester**

Sl. No	Course Code	Course Title	L	T	P	Contact Hrs /Wk	Credits
1	MSAG E1101	Insect Morphology and Classification	2	0	1	4	3
2	MSAG E1102	Insect Anatomy, Physiology and Nutrition	2	0	1	5	3
3	MSAG E1103	Insect Ecology, Pest Management, Storage and Quarantine Entomology	2	0	1	5	3
4	MSAG E1104	Statistical Methods and Design of Experiments	2	0	1	5	3
5	MSAG E1105	Computer Application for Agricultural Research	1	0	1	4	2
6	MSAG E1106	Research	0	0	1	3	1
7	NGC E1101**	Agriculture research ethics and methodology	0	0	1	3	1**
8	NGC E1101**	Technical writing and communication skills	0	0	1	3	1**
		<b>TOTAL</b>	<b>9</b>	<b>0</b>	<b>6+2**</b>	<b>34</b>	<b>15+2**</b>

NGC\*\*-Non gradial courses

## II Semester

Sl. No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1	MSAG E1201	Toxicology of Insecticides	2	0	1	5	3
2	MSAG E1202	Biological Insect Pest Suppression	2	0	1	5	3
3	MSAG E1203	Pests of Crops and their Management	2	0	1	5	3
4	MSAG E1204	Plant Resistance to Pests	1	0	1	4	2
5	MSAG E1205	Concepts in crop physiology	2	0	1	5	3
6	MSAG E1206	Research	0	0	2	6	2
7	NGC E1201**	Basic Concepts in Laboratory Techniques	0	0	1	3	1**
8	NGC E1201**	Library and Information Services	0	0	1	3	1**
		<b>TOTAL</b>	<b>9</b>	<b>0</b>	<b>7+2**</b>	<b>36</b>	<b>16+2**</b>

## III Semester

Sl. No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1	MSAG E2301	Minor Course - Related discipline	2	0	1	5	3
2	MSAG E2302	Minor Course - Related discipline	2	0	1	5	3
3	MSAG E2303	Research	0	0	8	24	8
4	MSAG E2304	Seminar	0	0	1	3	1
5	NGC E2301**	Intellectual property and its management in agriculture	1	0	0	1	1**
6	NGC E2302**	Disaster management	1	0	0	1	1**
7	NGC E2303**	Constitution of India	1	0	0	1	1**
		<b>TOTAL</b>	<b>4+3**</b>	<b>0</b>	<b>11</b>	<b>40</b>	<b>15+3**</b>

### IV Semester

Sl. No	Course Code	Course Title	L	T	P	Contact Hrs / Wk	Credits
1	MSAG E2401	Research	0	0	9	27	9
2	VAC 2401*	Value Added Course	3	0	0	3	3*
		<b>TOTAL</b>	<b>3*</b>	<b>0</b>	<b>9</b>	<b>30</b>	<b>9+3*</b>

**VAC\*- Value added course (as per approval in the Board of Studies)**

### SEMESTER WISE CREDIT LOAD

S. No.	SEMESTER	L	T	P	C
1.	SEMESTER I	9	0	6+2**	15+2**
2.	SEMESTER II	9	0	7+2**	16
3.	SEMESTER III	4+3**	0	11	15
4.	SEMESTER IV	0	0	9	9
	<b>TOTAL</b>	<b>22+3**</b>	<b>0</b>	<b>33+4**</b>	<b>55+7**</b>

**\*\*NGC: Non-gradual courses**

**Total credits with Non-Credit courses (7 credits) as recommended by ICAR = 55+7\* =62**

## DISTRIBUTION OF COURSES

<b>MAJOR – 20 CREDITS</b>							
S. No.	Course Code	Courses	L	T	P	Contact Hrs / Wk	Credits
1.	MSAG E1101	Insect Morphology and Classification	2	0	1	4	3
2.	MSAG E1102	Insect Anatomy, Physiology and Nutrition	2	0	1	5	3
3.	MSAG E1103	Insect Ecology, Pest Management, Storage and Quarantine Entomology	2	0	1	5	3
4.	MSAG E1201	Toxicology of Insecticides	2	0	1	5	3
5.	MSAG E1202	Biological Insect Pest Suppression	2	0	1	5	3
6.	MSAG E1203	Pests of Crops and their Management	2	0	1	5	3
7.	MSAG E1204	Plant Resistance to Pests	1	0	1	4	2
<b>Total</b>			<b>13</b>	<b>0</b>	<b>7</b>	<b>34</b>	<b>20</b>
<b>MINOR- 9 CREDITS</b>							
1.	MSAG E1205	Concepts in crop physiology	2	0	1	5	3
2.	MSAG 23##	Minor Course from other discipline	2	0	1	5	3
3.	MSAG 23##	Minor Course from other discipline	2	0	1	5	3
<b>Total</b>			<b>6</b>	<b>0</b>	<b>3</b>	<b>15</b>	<b>9</b>
<b>SUPPORTING COURSES - 5 CREDITS</b>							
1.	MSAG E1104	Statistical Methods and Design of Experiments	2	0	1	5	3
2.	MSAG E1105	Computer Application for Agricultural Research	1	0	1	4	2
<b>Total</b>			<b>3</b>	<b>0</b>	<b>2</b>	<b>9</b>	<b>5</b>
<b>SEMINAR AND RESEARCH- 21 CREDITS</b>							
1.	MSAG E2304	Seminar	0	0	1	3	1
2.	MSAG E1106	Research	0	0	1	3	1
3.	MSAG E1206	Research	0	0	2	6	2
4.	MSAG E2303	Research	0	0	8	24	8
5.	MSAG E2401	Research	0	0	9	27	9
<b>Total</b>			<b>0</b>	<b>0</b>	<b>21</b>	<b>63</b>	<b>21</b>
<b>Grand Total</b>			<b>22</b>	<b>0</b>	<b>33</b>	<b>120</b>	<b>55</b>

### NON-CREDIT COMPULSORY COURSE

S. No.	Course Code	Courses	L	T	P	Contact Hrs / Wk	Credits
1.	NGC 1101	Agriculture research ethics and methodology	0	0	1	3	1
2.	NGC 1102	Technical writing and communication skills	0	0	1	3	1
3.	NGC 1201	Basic concepts in laboratory techniques	0	0	1	3	1
4.	NGC 1202	Library and information services	0	0	1	3	1
5.	NGC 2301	Intellectual property and its management in agriculture	1	0	0	1	1
6.	NGC 2302	Disaster management	1	0	0	1	1
7.	NGC 2303	Constitution of India	1	0	0	1	1

### MINOR COURSES

S. No.	Course Code	Courses	L	T	P	Contact Hrs / Wk	Credits
1.	MSAG 2301	Organic farming and precision agriculture	2	0	1	5	3
2.	MSAG 2302	Dry farming and water shed management	2	0	1	5	3
3.	MSAG 2303	Productive insects and weed killers	2	0	1	5	3
4.	MSAG 2304	Pest management in organic farming	2	0	1	5	3
5.	MSAG 2305	Biological control of crop diseases	2	0	1	5	3
6.	MSAG 2306	Mushroom technology	2	0	1	5	3
7.	MSAG 2307	Microbial inoculant production technology	2	0	1	5	3
8.	MSAG 2308	Industrial microbiology	2	0	1	5	3
9.	MSAG 2309	Soil, Water and air pollution	2	0	1	5	3
10.	MSAG 2310	Soil health management	2	0	1	5	3
11.	MSAG 2311	Concepts of crop physiology	2	0	1	5	3
12.	MSAG 2312	Bio-instrumentation	2	0	1	5	3
13.	MSAG 2313	Plant tissue culture	2	0	1	5	3
14.	MSAG 2314	Germplasm collection, exchange and quarantine	2	0	1	5	3
15.	MSAG 2315	Fundamentals of genetics	2	0	1	5	3
16.	MSAG 2316	Seed production techniques in crops	2	0	1	5	3
17.	MSAG 2317	Seed quality testing and certification	2	0	1	5	3
18.	MSAG 2318	Propagation and nursery	2	0	1	5	3

		management of horticultural crops					
19.	MSAG 2319	Genetic resources and conservation of fruit crops	2	0	1	5	3
20.	MSAG 2320	Hi - tech vegetable production	2	0	1	5	3
21.	MSAG 2321	Ornamental horticulture	2	0	1	5	3
22.	MSAG 2322	Genetic resources and conservation of medicinal and aromatic plants	2	0	1	5	3
23.	MSAG 2323	Natural resource and environmental economics	2	0	1	5	3
24.	MSAG 2324	Agribusiness analysis	2	0	1	5	3
25.	MSAG 2325	Agricultural insurance and risk management	2	0	1	5	3
26.	MSAG 2326	Farm journalism	2	0	1	5	3
27.	MSAG 2327	Introduction to visual communication and advertising technologies	2	0	1	5	3