

Revised Course Curriculum and Syllabus

As per Recommendations of V Deans

Committee ICAR, New Delhi of various degrees

UG Degree nomenclature as per V Deans Committee Report

Sr. No.	Degree	Nomenclature
As per V Deans Committee Report		
1	Agriculture	B.Sc. (Hons) Agriculture
2	Agriculture Engineering	B. Tech. (Agricultural Engineering)
3	Biotechnology	B.Tech. (Biotechnology)
4	Fisheries	B.F. Sc.
5	Food Technology	B. Tech. (Food Technology)
6	Forestry	B. Sc. (Hons) Forestry
7	Community Science	B.Sc. (Hons) Community Science
8	Horticulture	B.Sc. (Hons) Horticulture
As presented by Degree Coordinator in 69th DICC		
9	Agri. Business Management	B.Sc. (Hons) Agri. Business Management
10	Animal husbandry	B.Sc. (Hons) Animal husbandry

Proposed credit load for various degrees

Semester	Degree Credit									
	B.Sc. (Agri.)	B.Sc. (Hort.)	B.Tech. (Agril. Engg.)	B.Sc. (Forestry)	B.F.Sc.	B.Sc. (Community Science)	B.Sc. (ABM)	B.Tech. (BioTech)	B.Sc. (A H)	B.Tech. (Food Tech.)
I	23	23	21	19	22	23	23	23	21	21
II	24	24	23	24	25	24	24	23	23	22
III	24	24	20	22	23	24	24	25	24	24
IV	24	24	23	23	23	24	23	24	24	23
V	24	23	29	23	24	23	22	25	23	24
VI	23	24	22	24	24	22	23	24	24	23
VII	20	20	25	22	21	20	20	20	20	23
VIII	20	20	20	23	24	20	20	20	20	20
Total	182	182	183	180	186	180	179	184	179	180

Note: The course on Democracy, Elections and Good Governance (1+0=1) shall be added in I sem. on approval ensuing DICC & MCAER.

Degree Co-ordinators

Sr No	Degree	Name and Designation
1	B.Sc.(Agri.)	Associate Dean, College of Agriculture, Pune
2	B.Sc.(Hort.)	Associate Dean, College of Horticulture, Dapoli
3	B.Tech. (Agril.Engg.)	Associate Dean, Dr. A.S. C.A.E, MPKV, Rahuri
4	B.Tech. (Food Tech.)	Associate Dean, College of Food Science and Technology, MAU, Parbhani
5	B.Sc. (Forestry)	Associate Dean, Dr. PDKV, Akola
6	B.F.Sc.	Associate Dean, College of Fishery Science, Dr. BSKKV, Dapoli
7	B.Sc.(Community Science)	Associate Dean, College of Home Science, Parbhani.
8	B.B.A. (Agri.)	Head, Department of Agril. Economics, MPKV, Rahuri
9	B.Sc. (Agril. BioTech)	Associate Dean, College of Agril. Biotechnology, Latur.
10	B.Sc.(Animal Husbandry)	Associate Dean, College of Agriculture, Dhule

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

Semester-I

Course No.	Courses	Credits		
		Total	T	P
A)	Core courses			
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
	Total Core courses	17	10	7
B)	Remedial Courses (3 or 4 credit)			
AGH 111	Agricultural Heritage	1	1	0
BIO 111	Introductory biology	2	1	1
MATH 111	Elementary Mathematics	2	2	0
	Sub total	3	3	0
c)	Non-Gradial Courses (3 credits)			
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
	Sub total	3	3	0
	Total Credits (A+B+C)	23	16	7

Semester -II

Course No.	Courses	Credits		
		Total	T	P
A)	Core Course			
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
	Total	19	12	7
B)	Non-gradial course			
FRST 121	Introduction to Forestry	2	1	1
	Educational Tour	1	0	1
	Subtotal	3	1	2
C)	Common Course			
EXTN 123	Communication Skills and personality Developments	2	1	1
	Subtotal	2	1	1
	Total Credits (A+B+C)	24	14	10

Semester III

Course No.	Courses	Credit		
		Total	T	P
A)	Core Course			
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
	Subtotal	19	10	9
B)	Common Courses			
COMP 231	Agri- Informatics	2	1	1
EVS 231	Environmental Studies and Disaster Management	3	2	1
	Subtotal	5	3	2
	Total Credits (A+B)	24	13	11

Semester IV

Course No.	Courses	Credit		
		Total	T	P
A)	Core Course			
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
	Subtotal	21	11	10
B)	Elective Courses (3 credits)			
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
	Subtotal Elective	3	2	1
	Total Credits (A+B)	24	13	11

Semester V

Course No.	Courses	Credit		
		Total	T	P
A)	Core Course			
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
	Subtotal	19	11	8
B)	Common Courses			
EXTN 355	Entrepreneurship Development and Business Communication	2	1	1
	Subtotal	2	1	1
C)	Elective Course (3 credits)			
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
	Subtotal	3	2	1
	Total (A+B+C)	24	14	10

Semester VI

Course No.	Courses	Credit		
		Total	T	P
A)	Core Course			
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
	Subtotal	20	11	9
B)	Elective courses			
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
	Subtotal	3	2	1
	Total (A+B)	23	13	10

Semester VII

RAWE& AIA Programme

Rural Agricultural Work Experience and Agro-industrial Attachment

Sr. No.	Activities	Number of weeks	Credits
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
Total weeks for RAWE and AIA		20	20

- **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.

1)

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
14	ELM HORT 4812	10(0+10)	Vegetable Production
15	ELM HORT 4813	10(0+10)	Protected Cultivation of Flowers and Vegetables
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

Sr. No.	Semester	Course No.	Credits	Course Title
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)
		Total Credits	42(11+31)	

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

Sr. No.	Semester	Course No.	Credits	Course Title
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

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

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 4814	10(0+10)	Post-harvest Management and Value Additions of Horticultural Crops (Proposed)

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
Total			13(9+1)	

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)
Total			12(8+4)	

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
		Total	18 (4+14)	

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

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
		Total	31(7+24)	

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	10(0+10)	Poultry Production

6	VIII	ELM AHDS 486	10(0+10)	Processing of Milk and Milk Products
		Total		

Other courses

Sr. No.	Semester	Course No.	Credits	Course Title
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
		Total		

Common Courses

Sr. No.	Semester	Course No.	Credits	Course Title
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
		Total	9(5+4)	