

Semester System

Semester wise Course Distribution for B. Sc. (Hons.) in Agriculture Degree

First Semester			
No	Course No	Title of Course	Credit
1	Agron.1.1	Principles of Agronomy and Introductory Agriculture	(2+1) = 3
2	Agron.1.2	Field Crops-I (<i>Kharif</i>)	(2+1) = 3
3	Ag.Chem.1.1	Introduction to Soil Science	(2+1) = 3
4	Ag.Econ.1.1	Principles of Agricultural Economics	(2+0) = 2
5	Pl.Path.1.1	Introductory Plant Pathology	(1+1) = 2
6	Hort.1.1	Production technology of fruit crops	(2+1) = 3
7	Eng.1.1	Comprehension and Communication Skills in English	(1+1) = 2
8	PBG.1.1	Economic Botany	(1+1) = 2
9	Maths.1.1	Biomathematics	(1+1) = 2
10	Ag.Stat.1.1	Introduction to computer application	(1+1) = 2
11	PE.1.1	NSS / NCC / Physical Education (Non credit course)	(0+1) = 1*
Total			(15+9)= 24+1*

Second Semester			
No	Course No	Title of Course	Credit
1	Pl.Path.2.2	Introductory Nematology	(1+1) = 2
2	Ag.Engg. 2.1	Fundamentals of soil water conservation and engineering	(2+1) = 3
3	Ag.Micro.2.1	Agricultural Microbiology	(2+1) = 3
4	Ag.Stat.2.2	Agricultural Statistics	(2+1) = 3
5	Ag.Chem.2.2	Soil Chemistry, Soil Fertility and Nutrient Management	(2+1) = 3
6	PBG.2.2	Principles of Genetics	(2+1) = 3
7	Ag.Econ.2.2	Agricultural marketing, Trade and Prices	(1+1) = 2
8	Agron.2.3	Field Crops-II (<i>Rabi</i>)	(2+1) = 3
9	Ag.Met.2.1	Agricultural Meteorology	(2+1) = 3
10	PE.2.2	NSS / NCC / Physical Education (Non credit course)	(0+1)= 1*
Total			(16+9)= 25+1*

Third Semester			
No	Course No	Title of Course	Credit
1	Agron.3.4	Practical crop production I (Cereals, Pulses and Fodder crops)	(0+1) = 1
2	Agron.3.5	Weed management	(1+1) = 2
3	PBG.3.3	Principles of Plant Breeding	(2+1) = 3
4	Hort.3.2	Production Technology of Vegetables & Flowers	(2+1) = 3
5	Pl.Phy.3.1	Crop Physiology -I	(1+1) = 2
6	Ag.Extn.3.1	Dimensions of Agricultural Extension	(2+1) = 3
7	Ag.Ento.3.1	Insect Morphology and Systematics	(2+1) = 3
8	Pl.Path.3.3	Principles of plant pathology	(1+1) = 2
9	Ag.Econ.3.3	Agricultural Finance and Co-operation	(1+1) = 2
10	Ag.Engg. 3.2	Farm power and machinery	(1+1) = 2
11	PE.3.3	NSS / NCC / Physical Education (Non credit course)	(0+1)= 1*
Total			(13+10) = 23+1*

Fourth Semester			
No	Course No	Title of Course	Credit
1	Agron.4.6	Practical crop production II (Oil seeds & commercial crops)	(0+1) = 1
2	Ag.Ento.4.2	Insect Ecology & Integrated pest management including beneficial insects	(2+1) = 3
3	LPM.4.1	Live stock production and management	(1+1) = 2
4	Ag.Econ.4.3	Agricultural Finance and Co-operation	(1+1) = 2
5	Hort.4.3	Production technology of spices, Aromatics Medicinal and Plantation crops	(2+1) = 3
6	PBG.4.4	Breeding of Field / Horticultural crops	(2+1) = 3
7	Ag.Extn.4.2	Fundamentals of Rural Sociology and Educational Psychology	(2+0) = 2
8	Biochem.4.1	Biochemistry	(2+1) = 3
9	Pl. Phy. 4.2	Crop Physiology -II	(1+1) = 2
10	Ag.Econ.4.4	Fundamentals of Farm Business Management (Including product development, Appraisal and Monitoring)	(2+1) = 3
11	Eng.4.4	English for special purpose (Non credit course)	(1+1) = 2*
12	PE.4.4	NSS / NCC / Physical Education (Non credit course)	(0+1)= 1*
Total			(15+9)= 24+3*

Fifth Semester			
No	Course No.	Title of Course	Credit
1	Agron.5.7	Water management including micro irrigation	(2+1) = 3
3	Ag.Ento.5.3	Pests of field crops and stored grain and their management	(2+1) = 3
4	Hort.5.4	Post harvest management and value addition of fruits and vegetables	(1+1) = 2
5	LPM.5.2	Dairy cattle and buffalo production and management	(2+1) = 3
6	Pl.Path.5.4	Diseases of Field Crops and their management	(2+1) = 3
7	PBG.5.5	Principles of Seed Technology	(2+1) = 3
8	Ag.Extn.5.3	Extension Methodologies for Transfer of Agricultural Technology	(1+1) = 2
9	Ag.Engg.5.3	Protected cultivation and Post harvest Technology	(1+1) = 2
10	Ag.Econ.5.5	Production Economics and farm management	(1+1) = 2
Total			(14+9)= 23

Sixth Semester			
No	Course No	Title of Course	Credit
1	Ag. Extn.6.4	Entrepreneurship Development	(1+1) = 2
2	Envs.6.1	Environmental Science	(1+1) = 2
3	Ag.Engg.6.4	Renewable Energy	(1+1) = 2
4	Agron.6.8	Organic Farming	(1+1) = 2
5	Agron.6.9	Farming Systems and Sustainable Agriculture	(1+1) = 2
6	Ag.Chem.6.3	Manures, Fertilizers and Agrochemicals	(2+1) = 3
7	PBG.6.6	Principles of plant biotechnology	(2+1) = 3
8	Pl.Path.6.5	Disease of Horticultural crops and their management	(2+1) = 3
9	Ag.Ento.6.4	Pests of Horticultural crops and their management	(1+1) = 2
Total			(12+9)= 21

VII Semester

Rural Agricultural Work Experience (RAWE): Under this programme two models are suggested and colleges could choose any one depending upon need assessment. * **The Navsari Agricultural University has adopted the RAWE Model II**

Sr.	RAWE Model I	Duration (Week)
1	Orientation	1
2	Village attachment	16
3	Research Station / KVK / DAATT Center activities and attachment to the Agro-based industries	2
4	Project report preparation and examination	1

Sr.	RAWE Model II	Duration (Week)
1	Orientation	1
2	Village attachment	6
3	Agri.-clinics / Plant Health Clinics / Experiential learning / Industrial Attachment	12
4	Project report preparation and examination	1

RAWEP Attachment with Agro-based Industries:

During RAWEP Programme the students will undergo internship in any one of the following industries / companies / institutes for a period of twelve weeks (the list is only suggestive and need based / location specific industries may be included).

- ❖ Seed industries / companies
- ❖ Fertilizer industries
- ❖ Pesticides industries
- ❖ Biotechnological industries (Tissue Culture labs)
- ❖ Bio pesticides industries
- ❖ Commercial nurseries / landscaping units
- ❖ Sericulture units
- ❖ Food processing units
- ❖ Agricultural finance Institutions / Banks / Credit Societies etc.
- ❖ Non – Governmental organizations

Evaluation of RAWEP Programme

Attendance: Minimum attendance for this programme - 90 per cent.

Records: Students shall complete the record work based on daily field observation notebooks and weekly diaries maintained by them.

Evaluation Procedure: The students shall be evaluated by Course Coordinator as well as by a designated evaluation Committee.

- Note:**
- i) The duration of the RAWEP is 20 weeks with a weightage of 20 credits;
 - ii) Wherever facilities are not available for industrial training and / or agri-clinics, the duration of vocational training may be increased to that extent;
 - iii) RAWEP can be implemented either in the VII or VIII semester as per convenience.

Seventh Semester

Rural Agricultural Work Experience (RAWE)

No.	Course No.	CREDITS	Phase wise work (period-days)								TOTAL
			P ₁	P ₂	P ₃	P ₄	P ₅	P ₆	P ₇	P ₈	
1	Agron. 7.10	0+2	1	4	0	3	1	-	0		9
2	Hort. 7.5	0+2	1	1	2	2	0	-	3		9
3	Ag. Chem. 7.4	0+2	1	3	0	2	0	-	3		9
4	PBG 7.7	0+2	1	3	2	2	0	-	1		9
5	Ag. Engg. 7.5	0+1	1	1	1	1	0	-	2		6
6	Pl. Path. 7.6	0+2	1	3	0	3	0	-	1		8
7	Ag. Ento. 7.4	0+2	1	3	0	3	0	-	1		8
8	LPM 7.3	0+1	0.5	0	0	2	1	-	1		4.5
9	Ag. Extn. 7.5	0+2	1	1	1	1	3	-	1		8
10	Ag. Econ. 7.6	0+1	1	1	0	1	0	-	2		5
11	Ag. Stat. 7.3	0+1	0.5	0	4	0	0	-	0		4.5
12	Educational Tour	0+2						21			21
13	Exam. Evaluation									7	7
Total working days			10	20	10	20	5	21	15	5	106
Total Saturday for missed & extra work			2	4	2	4	1	-	3	1	17
Holidays			2	4	2	4	1	-	3	1	17
Total days			14	28	14	28	7	21	21	7	140

P₁ = Orientation, P₂ = Research Station, P₃ = High Tech Cell, P₄ = Village Exposure, P₅ = NGO P₆ = Educational Tour P₇ = Industries and Cooperatives P₈ = Report and Evaluation

VIII Semester

Courses for Experiential Learning: A student has to register **20 credits** with major load in one area of electives and rest from among one / two areas of electives in the eighth semester.

Courses for Experiential Learning

Sr.	Title of the module	Credits
I Crop Production		
1	Seed Production Technology	
2	Remote Sensing GIS and Land use Planning	3(1+2)
3	Integrated Farming System	3(1+2)
4	Water Management (Watershed Micro-irrigation Problematic Water)	3(1+2)
5	Soil Management (conservation Problematic soil, Soil quality)	4(1+3)
II Crop Protection		
1	IPM and IDM (Pest Disease Scouting)	4(2+2)
2	Management of Post Harvest insect- pests and diseases	3(1+2)
3	Non-insect pests and their Management	3(1+2)
4	Apiculture	2(0+2)
5	Mushroom (cultivation)	2(0+2)
6	Bio-control agencies and bio-pesticide (mass multiplication and uses)	3(1+2)
7	Pesticides and Plant Protection equipment	3(1+2)
III Horticulture		
1	Commercial Vegetable Production	3(1+2)
2	Commercial Floriculture	3(1+2)
3	Commercial Fruit Production	3(1+2)
4	Nursery management of horticultural crops	4 (1+3)
5	Protected cultivation of horticultural crops and Seed production of vegetables and flowers	4(1+3)
6	Processing and value addition of horticultural crops	3(1+2)
IV Post Harvest Technology and Value addition		
1	Post harvest Technology of Horticultural crops	3(1+2)
2	Unit operation for quality value addition processing and development of new products	4(1+3)
3	Post harvest technology of spices, plantation crops, medicinal and aromatic crops	4(1+3)
4	Integrated storage management of fruits, flowers and vegetables	3(1+2)
5	Post harvest handling of cut flowers and dry flowers	3(1+2)
6	Processing of cereals, pulses and oilseed crops including biodiesel	3(1+2)
V Agri.-Business Management		
1	Information & Communication Management	3 (1+2)
2	Management of Agro-based industry	4 (1+3)
3	Marketing Management (Agricultural Import-Export Policy of Govt. of India & Business Laws)	3 (1+2)
4	Financial Management of Agri.-Business	4 (1+3)
5	Natural Resources Economics and Management	3 (1+2)
6	Project formulation, Evaluation and Monitoring	3 (1+2)

VI Social Sciences		
1	Agricultural Journalism	3 (1+2)
2	Visuals and Graphic Communications	3 (1+2)
3	Cyber Extension	2 (1+1)
4	Behavioral Skills	3 (1+2)
5	Livestock, Poultry and Fish Marketing	3 (1+2)
6	Farm Planning and Budgeting	3 (1+2)
7	Government Policies and Programmes Related to Agriculture	3 (1+2)
VII Basic Sciences		
1	Molecular Breeding	3 (1+2)
2	Plant tissue culture	4 (1+3)
3	Recombinant DNA Technology	3 (1+2)
4	Bio informatics	3 (1+2)
5	Microbial & Environmental Technology	4 (1+3)
6	Molecular Diagnostics	3(1+2)
VIII Commercial Agriculture		
1	Commercial floriculture	3 (0+3)
2	Commercial fruit production	3 (0+3)
3	Nursery management of horticultural crops	3 (1+2)
4	Cultivation of commercially important medicinal & aromatic plants	2 (1+1)
5	Commercial spices production	3 (1+2)
6	Production technology of economic forest plants	3 (1+2)
7	Commercial seed production technologies	3 (1+2)

Features of New Curriculum

- ❖ Six semesters' coursework, one semester RAWEP and one-semester electives in interdisciplinary courses for entrepreneurship development. In the electives, students have flexibility to choose courses. These courses have higher practical exercises for skill updation. The proportion of theory and practical is nearly 50:50
- ❖ Adequate expertise for agri.-clinic embedded.
- ❖ Curriculum redundancy removed.
- ❖ Course curricula reoriented to develop needed knowledge skills, entrepreneurial mindset of the student to take up self employment
- ❖ Three non-credit courses viz., Comprehension and Developing Communication Skills in English and NSS/ NCC / Physical Education are included.
- ❖ **Each University may provide specialization in 4 or 5 areas keeping in view the facilities and the need.**
- ❖ Introduced few new courses like Introductory Agriculture, Renewable Energy, Organic farming, Biotechnology, Agribusiness, Project Development Appraisal and Monitoring and Entrepreneurship Development.