

**MRSPTU B.SC. (HONS.) AGRI BUSINESS MANAGEMENT SYLLABUS BATCH  
2022 ONWARDS**

Semester 1 <sup>st</sup>		Contact Hours			Max Marks		Total Marks	Credits
Subject Code	Subject Name	L	T	P	Int.	Ext.		
BABMS1-101	Agro-Techniques of Principal Field Crops-I (Kharif)	4	-	-	40	60	100	4
BABMS1-102	Fundamentals of Soil Science	4	-	-	40	60	100	4
BABMS1-103	Production Management of Important Fruit Crops	4	-	-	40	60	100	4
BABMS1-104	Information and Communication Technology	2	-	-	40	60	100	2
BABMS1-105	Principles of Management and Agribusiness	4	-	-	40	60	100	4
BABMS1-106	Comprehensive and Communication Skills in English	2	-	-	40	60	100	2
BABMS1-107	Fundamentals of Soil Science Lab	-	-	2	60	40	100	1
BABMS1-108	Information and Communication Technology Lab	-	-	2	60	40	100	1
Total		20	-	4	360	440	800	22

Semester 2 <sup>nd</sup>		Contact Hours			Max Marks		Total Marks	Credits
Subject Code	Subject Name	L	T	P	Int.	Ext.		
BABMS1-201	Agro-Techniques of Principal Field Crops-II(Rabi)	3	-	-	40	60	100	3
BABMS1-202	Production Management of Vegetable, Floricultural, Aromatic and Medicinal Crops	3	-	-	40	60	100	3
BABMS1-203	Principles of Plant Biotechnology	3	-	-	40	60	100	3
BABMS1-204	Soil, Water and Plant Analysis	3	-	-	40	60	100	3
BABMS1-205	Value Addition in Animal Products	3	-	-	40	60	100	3
BABMS1-206	Money, Banking and International Trade	3	-	-	40	60	100	3
BABMS1-207	Agro-Techniques of Principal Field Crops-II(Rabi) Lab	-	-	2	60	40	100	1
BABMS1-208	Production Management of Vegetable, Floricultural, Aromatic and Medicinal Crops Lab	-	-	2	60	40	100	1
BABMS1-209	Principles of Plant Biotechnology Lab	-	-	2	60	40	100	1
BABMS1-210	Soil, Water and Plant Analysis Lab	-	-	2	60	40	100	1
Total		18	-	8	480	520	1000	22

**AGRO-TECHNIQUES OF PRINCIPAL FIELD CROPS-I (KHARIF)**

**Subject Code: BABMS1-101**

**L T P C**

**Duration: 60 (Hrs.)**

**4 0 0 4**

**Course Objectives:**

1. Students will get familiar with the various elements influencing crop production.
2. Share information about the history, geography, variations, and cultural customs associated with various Kharif crops.
3. The origin, distribution, variety, and cultural techniques of several oilseeds, legumes, and other fodder crops will be covered in class.

**Course Outcomes:**

1. Students will learn about the different factors effecting crop production.
2. Provide knowledge about the origin, distribution, varieties and cultural practices of different Kharif crops.
3. Students will learn about the origin, distribution, varieties and cultural practices of different oilseeds, Legumes and other fodder crops.

**Mapping**

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2
CO1		1										
CO2			2									
CO3			2									

**UNIT-I (15 Hrs)**

Importance of agricultural meteorology – weather and climatic factors affecting crops

**UNIT-II (15 Hrs)**

Origin, geographic distribution, economic importance, soil and climatic requirement, varieties, cultural practices and yield of kharif crops. Cereals: Rice, maize, kharif sorghum, pearl millet and minor millets

**UNIT-III (15 Hrs)**

Origin, geographic distribution, economic importance, soil and climatic requirement, varieties, cultural practices and yield of Pulses: Pigeon pea, mung bean, urid bean, horse gram, moth bean, cowpea Oil seeds: Groundnut, sesame, soybean, castor and niger

**UNIT-IV (15 Hrs)**

Origin, geographic distribution, economic importance, soil and climatic requirement,

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varieties, cultural practices and yield of Fibre crops: Cotton, jute, sun hemp and dhaincha  
Forage crops : Sorghum, pearl millet, maize, cowpea, cluster bean, rainfed and irrigated  
grasses

**Recommended Text Books / Reference Books:**

1. Handbook of Agriculture, ICAR Publication, 6<sup>th</sup> edition, 2006.
2. Chhida Singh, Prem Singh and Rajbir Singh Modern Techniques of raising field crops, 2<sup>nd</sup> edition
3. Rajendra Prasad Field Crops,
4. Reddy SR, Principles of Agronomy, Kalyani Publishers Third edition
5. S.S. Cheema, B.K. Dhaliwal and T.S. Sahota Theory and Digest Agronomy
6. M.M. Hosmani, B.M. Chittarpur and H.B. Babalad. Farm Productivity New Century New Challenges
7. V.G. Vaidya, K.R. Sahasrabudhe and V.S. Khuspe, Crop production and field experimentation Continental Prakashan, Pune.

**FUNDAMENTALS OF SOIL SCIENCE**

**Subject Code: BABMS1-102**

**L T P C**

**Duration: 60 (Hrs.)**

**4 0 0 4**

**Course Objectives:**

1. Students will get knowledge of how soil is formed.
2. To educate people on the various characteristics of soil and the variables that effect it.
3. The C:N ratio, soil microorganisms, and classification of soils according to various parameters will all be taught to students.

**Course Outcomes:**

1. Students will learn about the origin of soil formation.
2. To impart knowledge about the different properties of soil and factors effecting it.
3. Students will learn about the composition of soil, C:N ratio, soil micro-organisms and classification of soils

**Based on different criteria's.**

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**Mapping**

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO11	PO12
CO1	2											
CO2		2										
CO3				2								

**UNIT-I (15 Hrs.)**

Soil pedological and edaphological concept. Origin of the earth Earth's crust composition Study of soil forming rocks and minerals, Weathering of rocks and minerals, Soil forming factors and processes, Components of soils

**UNIT-II (15 Hrs.)**

Study of soil profile, Soil physical properties: Soil texture, textural classes, particle size analysis, Soil structure Classification, soil aggregates, significance of soil consistency, Soil crusting. Bulk density and Particle density. Soil porosity, their significance and manipulation. Soil compaction and soil colour

**UNIT-III (15 Hrs.)**

Soil water: Retention and potentials, Drainage: Soil temperature, Soil air: Gaseous exchange. Influence of soil temperature, air on plant growth, Soil colloids: Properties, nature, types and significance, Ion exchange. CEC and AEC. Factors influencing ion exchange and its significance

**UNIT-IV (15 Hrs.)**

Soil organic matter: composition, C:N ratio, Soil biology: Definitions oil Biomass, soil organisms and their beneficial and harmful roles, Soil survey and USDA Soil classification. L and Capability classification Soils of India, Soils of Maharashtra, Soil erosion. Types, universal soil loss equation & control measures

**Recommended Text Books / Reference Books:**

**1) Text Book:**

1. By J.A. Daji Textbook of Soil Science.

**2) Reference books:**

1. By C.C. Shahand NK. Narayana (1966) Physical properties of soil
2. By Henry. D. Fothk Fundamentals of Soil Science (8<sup>th</sup> edition)1990.
3. By Biswasand Mukharjeee Textbook of Soil Science(Second edition)1994

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**PRODUCTION MANAGEMENT OF IMPORTANT FRUIT CROPS**

**Subject Code: BABMS1-103**

**L T P C**

**Duration: 60 (Hrs.)**

**4 0 0 4**

**Course Objectives:**

1. Students will gain knowledge about the significance, range, and current state of India's fruit production.
2. To educate people on the nutritional benefits of fruit.
3. To learn about various orchard training and trimming techniques.

**Course Outcomes:**

1. Students will learn about importance, scope and present status of fruit production in India.
2. To impart knowledge about the nutritive values of fruits.
3. To provide knowledge about the different training and pruning methods in orchard.

**Mapping**

CO/P O	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2
CO1	2											
CO2						2						
CO3					2							

**UNIT-I (15 Hrs.)**

Classification of fruit crops on horticultural basis. Importance, present status and future scope for fruit growing in Maharashtra and India. Area and production, export, import scenario of fruit crops and plantation crops in Maharashtra and India.

**UNIT-II (15 Hrs.)**

Nutritive value of fruits, importance of selection of site, fencing, planting systems, high density planting, wind breaks and shelter belts in fruit production. Propagation methods and use of rootstocks, methods of training and pruning.

**UNIT-III (15 Hrs.)**

Special horticultural practices like bahar treatment, ringing, girdling, bending, notching, etc. Nutrient management, water management, weed control, mulching, intercropping, use of growth regulators in fruit production, physiological disorders in fruit crops.

**UNIT-IV (15 Hrs.)**

Package of practices for cultivation of major fruit crops like, mango, banana, citrus, grape, papaya, sapota, guava, pomegranate, minor fruit crops like ber, fig, coconut, are canut, etc.

Industrial value of plantation crops (Give brief cultivation information in tabular form for minor crops).

**Recommended Text Books / Reference Books:**

**1) Text Book:**

**2) Reference books:**

1. Hayes, W.B. Fruit Growing in India. Kitab Publishing Co., Allahabad.
2. Shanmugavelu, K.G. Production Technology of Fruit Crops, SBA Publishers, Kolkatta.
3. Singh, Ranjeet. Fruits. National Book Trust Ltd., New Delhi.
4. Sham Singh. Fruit Growing. Kalyani Publishers, New Delhi.
5. Bose, T.K. and S.K.Mitra. Propagation of Tropical and Subtropical Horticultural Crops, Naya Udyog,206, Bidhan Savani, Kolkatta-700016.
6. Baker, H.Fruits. Mitchell Meagrely Publications, London.
7. Singh, A. Fruit Production and Technology. Kalyani Publishers, New Delhi.
8. Yadav, P. K. Fruit Production Technology. International Book Distributing Co., Division, Lucknow, Inida.
9. Sharma, R.R. Fruit Production Problems and Solutions. International Book Distributing Co., Division, Lucknow, India.
10. Kumar, P. Management of Horticultural Crops. (Hort Science Series Vol. 11, New India Publishing Agency, NIPA). Kumar, P. Management of Horticultural Crops. (Hort Science Series Vol.11, New India Publishing Agency,NIPA).
11. Kunte, Y. N, Kawthalkar, M. P., Yawalkar, K.S. Principles of Horticulture and Fruit growing, Agro-Horticultural Pub. House, Nagpur.

**INFORMATION AND COMMUNICATION TECHNOLOGY**

**Subject Code: BABMS1-104**

**L T P C**

**Duration: 30 (Hrs.)**

**2 0 0 2**

**Course Objectives:**

1. To explain the significance of IT and the many information technology industries.
2. The merits and disadvantages of machine language, assembly language, and high-level language will be taught to students.
3. To impart knowledge about Microsoft Office, including Word, Excel, and Power Point, as well as audio visual tools, etc.

**Course Outcomes:**

1. To provide importance of IT and the different sectors of information technology.
2. Student will learn about machine language, assembly language, high-level language and their advantages and Disadvantages.
3. To provide knowledge about MS Office - Word, Excel, Power Point; Audio visual aids etc.

**Mapping**

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2
CO1	1											
CO2					2							
CO3					2							

**UNIT-I (7 Hrs.)**

IT and its importance; IT tools; IT-enabled services and their impact on society; Computer fundamentals; Hardware and software; Input and output devices; Word and character representation

**UNIT-II (7 Hrs.)**

Features of machine language, assembly language, high-level language and their advantages and disadvantages; Principles of programming-algorithms and flowcharts.

**UNIT-III (8 Hrs.)**

Operating systems (OS) - definition, basic concepts; Introduction to WINDOW Sand LINUX Operating Systems; Local area network (LAN); Wide area network (WAN); Internet and World Wide Web; HTML and IP

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**UNIT-IV (8 Hrs.)**

Introduction to MS Office - Word, Excel, Power Point; Audio visual aids - definition, advantages, classification and choice of A.V. aids; Criteria for selection and evaluation of aids; Video conferencing; Communication process, Berlo's model, feedback and barriers to communication.

**Recommended Text Books / Reference Books:**

1. Gurvinder Singh, Rachhpal Singh & Saluja KK. 2003. Fundamentals of Computer Programming and Information Technology. Kalyani Publishers.
2. Harshwardhan P. Bal. 2003. Perl Programming for Bioinformatics. Tata McGraw-Hill Education.
3. Kumar A 2015. Computer Basics with Office Automation. IK International Publishing House Pvt Ltd.
4. Rajaraman V & Adabala N. 2015. Fundamentals of Computers. PHI Recommended Latest Online Tutorials (over Internet).

**PRINCIPLES OF MANAGEMENT AND AGRIBUSINESS**

**Subject Code: BABMS1-105**

**L T P C**

**Duration: 60 (Hrs.)**

**4 0 0 4**

**Course Objectives:**

1. Students will gain knowledge of the significance, application, and scope of agribusiness in the Indian economy.
2. To impart knowledge about the significance, range, and many functions of management.
3. To spread knowledge about the fundamentals, significance, traits, and nature of organisations.

**Course Outcomes:**

1. Students will learn about the meaning importance and scope agribusiness in Indian economy.
2. To provide the knowledge about importance, scope and different functions of management.
3. To impart knowledge about the principles, importance, characteristics and nature of organization.

**Mapping**

CO/P O	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2
CO1	2											



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CO2	2											
CO3	2											

**UNIT-I (15 Hrs.)**

Agri-business: Meaning, definition, history and scope of agri-business (Input, Farm Product Sectors). Importance of agri-business in the Indian economy. Changing dimension of agricultural business. Agri-business Management-distinctive features, nature and components

**UNIT-II (15Hrs.)**

Introduction to management-Management functions-Management levels-Managerial roles-Management skills-Definitions of management-Role of management. Elements, Levels, Process of Management

**UNIT-III (15 Hrs.)**

Functions of Management: Planning: Definition importance, characteristics, Steps in planning Types of planning Nature and importance-Purpose of planning-Forms of planning- types of planning-Steps in planning-Limitations of planning. Organizing: Meaning-definition, importance, Characteristics/Nature of organization. Principles & Process of organization.

**UNIT-IV (15 Hrs.)**

Functions of Management: Directing-definition, functions, techniques, qualities of good supervisor. Controlling-Definition, Elements, Process of control, Techniques/Tools of control. Farm business analysis-Farm efficiency measures, farm financial & cash accounts, Net worth statement, systems of book keeping.

**Recommended Text Books / Reference Books:**

1. K. Loknandhan, K.Mani, K. Mahendran Innovations in AB
2. D.K. Tripathi Principles & Practices of Management.
3. S.S. Johl, T.R. Kapoor Fundamentals of farm business management

**COMPREHENSIVE AND COMMUNICATION SKILLS IN ENGLISH**

**Subject Code: BABMS1-106**

**L T P C**

**Duration: 30 (Hrs.)**

**2 0 0 2**

**Course Objectives:**

1. To convey the value of education.
2. The applications of the English language in daily life will be taught to the students.

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3. To impart knowledge about the current scenario around community.

**Course Outcomes:**

1. To impart importance of education.
2. Students will learn about the uses of English language in their daily lives.
3. To provide knowledge about the current scenario around community.

**Mapping**

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2
CO1	2											
CO2										2		
CO3										2		

The following Lessons from the *textbook-Current English for Colleges* (by N Krishnaswamy and T. Sriraman; Macmillan;2007Rs.951-)-are for the theory classes along with the Exercises at the end of each lesson.

**UNIT-I (08 Hrs.)**

1.Education 2. Employment 3. Unemployment 4.Application 5.Planning

**UNIT-II (08 Hrs.)**

6.Curriculum Vitae 7. Interview 8 .Reporting 9.General Knowledge 10.Stress

**UNIT-III (07 Hrs.)**

11. Short Story 12.Environment 13.Computeracy 14.ADilemma

**UNIT-IV (07 Hrs.)**

15.Entertainment 16.You and Your English 17.Usage and Abusage 18.War  
Minus Shooting

**Recommended Text Books / Reference Books:**

1. Krishnaswamy, Nand Sriraman, T.1995. Current English for Colleges. Macmillan India Ltd. Madras.
2. BalasubrmnyamM.1985.BusinessCommunication.VaniEducationalBooks, New Delhi.
3. Naterop, Jean, B. and Rod Revell Telephoning in English. 1997. Cambridge University Press, Cambridge.
4. Mohan Krishna and Meera Banerjee.1990. Developing Communication Skills. Macmillan India Ltd. New Delhi.
5. NarayanaswamyVR.1979.Strengthenyourwriting.OrientLongman, New Delhi.
6. SharmaRCandKrishnaMohan.1978.BusinessCorrespondance. Tata

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McGraw Hill Publishing Company, New Delhi.

7. Carnegie, Dale. 2012. How to Win Friends and Influence People in the Digital Age. Simon & Schuster.
8. Covey Stephen R.1989. The Seven Habits of Highly Successful People. FreePress.
9. Spitzberg B, Barge K & Morreale, SherwynP.2006. Human Communication: Motivation, Knowledge & Skills. Wadsworth.
10. Verma, KC.2013. The Art of Communication. Kalpaz.
11. MamathaBhatnagarandNitinBhatnagar.2011. Effective Communication and Soft Skills. Person Education.
12. Meenakshi Raman, Sangeeta Sharma. Technical Communication Principles and Practice
13. HaroldWallaceandAnnMasters.PersonalityDevelopment.CengagePublishers.

**FUNDAMENTALS OF SOIL SCIENCE LAB**

**Subject Code: BABMS1-107      L T P C      Duration: 30 (Hrs.)**  
**0 0 2 1**

**Course Objectives:**

1. The preparation of various soils and plant samples will be examined with the students.
2. Students will be able to identify soil's fundamental characteristics.
3. Students will be able to assess the soil's nutritional condition.

**Course Outcomes:**

1. Students will learn about the preparation of different soil and plant samples.
2. Students will be able to determine the basic properties of soil.
3. Students will be able to determine nutrient status of soil.

**Mapping**

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO11	PO12
CO1		2										
CO2				2								
CO3		2										

**Practical**

1. Basic analytical concepts, techniques and calculation.
2. Collection and preparation of soil samples for horticultural crops
3. Determination of moisture content in soil by gravimetric method
4. Determination of pH and EC of soil sample

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- 5 Determination of calcium carbonate by Rapid Titration method
- 6 Determination of Organic carbon by Walkely and Black method
- 7 Determination of Bulk density and porosity of soil
- 8 Textural analysis of soil by Boucouyos hydrometer method
- 9 Determination of available nitrogen content in soil
- 10 Determination of available Phosphorus from soil
- 11 Determination of available Potassium from soil
- 12 Determination of available sulphur from soil
- 13 Determination of DTPA extractable micronutrient from soil
- 14 Description of soil profile in field
- 15 Determination of soil colour using Munsell colour chart, Estimation of water holding capacity ,  
Field capacity, Permanent wilting point and
- 16 Determination of soil water potential characteristic curve by tension meter and pressure plate apparatus
- 17 Visit to Soil and Water Clinic

**Recommended Text Books / Reference Books:**

**1) Text Book:**

1. By J.A. Daji Textbook of Soil Science.

**2) Reference books:**

1. By C.C. Shah and NK. Narayana(1966)Physical properties of soil
2. By Henry. D. Fothk Fundamentals of Soil Science (8th edition)1990.
3. By Biswas and Mukharjee Textbook of Soil Science (Second edition)1994

**INFORMATION AND COMMUNICATION TECHNOLOGY LAB**

**Subject Code: BABMS1-108**

**L T P C**

**Duration: 30 (Hrs.)**

**0 0 2 1**

**Course Objectives:**

1. The binary number system, algorithms, flowcharts, and other topics will be taught to students.
2. Teach how to use MS Word, MS Excel, MS Power Point, and MS Excel for data analysis.
3. Share information on poster and chart development, presentation, and equipment handling.

**Course Outcomes:**

1. Students will learn about binary number system, Algorithm and flow chart etc.
2. Provide knowledge about MS Word, MS Excel and MS Power Point and analysis of data using MS Excel.

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3. Provide knowledge about preparation, presentation of posters, charts and handling of different equipment.

**Mapping**

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2
CO1					1							
CO2					2							
CO3					2							

**Practical**

1. Exercises on binary number system
2. Algorithm and flow chart;
3. Working on Microsoft office such as MS Word, MS Excel, MS Power Point
1. Internet applications: web browsing, creation and operation of email account
2. Analysis of data using MS Excel
3. Handling of audio visual equipment
4. Planning, preparation, presentation of posters, charts, overhead transparencies and slides
5. Organization of an audio visual programme.

**Recommended Text Books / Reference Books:**

1. Gurvinder Singh, Rachhpal Singh & Saluja KK. 2003. Fundamentals of Computer Programming and Information Technology. Kalyani Publishers.
2. Harshwardhan P. Bal. 2003. Perl Programming for Bioinformatics. Tata McGraw-Hill Education.
3. Kumar A 2015. Computer Basics with Office Automation. IK International Publishing House Pvt Ltd.
4. Rajaraman V & Adabala N. 2015. Fundamentals of Computers. PHI  
Recommended Latest Online Tutorials (over Internet).