

FACULTY OF LIFE SCIENCES

SYLLABUS

Of

Botany For

Bachelor of Science (Home Science)

Semester-V

**(Under Credit Based Continuous Evaluation Grading System Under
NEP 2020)**

Session: 2026-2027



The Heritage Institution

**KANYA MAHA VIDYALAYA
JALANDHAR
(Autonomous)**

KANYA MAHA VIDYALAYA, JALANDHAR (AUTONOMOUS)
SCHEME AND CURRICULUM OF EXAMINATION OF
Bachelor of Science Home Science (Three Year Degree Programme)
Bachelor of Science (Honours) Home Science (Four Year Degree Programme)
(Session: 2026-2027)

Bachelor of Science (Honours) Home Science (Semester V)

Course Code	Course Name	Course Type	Hours Per Week L-T-P	Credits L-T-P	Total	Marks				Examination time (in Hours)
						Total	Ext.		C A	
							L	P		
BHSM- 5075	Applied Botany And Home Gardening	MDC	2-0-2	2-0-1	3	100	50	20	30	3+3

Bachelor of Science (Honours) Home Science (Semester V) Session 2026-2027
Course Title: Applied Botany and Home Gardening
Course Code: BHSM-5075
(Theory)

Course outcome: -

After passing this course the student will be able to:

CO:1 Apply appropriate soil preparation techniques for gardening and perform different methods of plant propagation

CO:2 Understand the concept of kitchen garden and plants propagated in it.

CO:3 Explain the planning, cultivation, and maintenance of lawns, hedges, ornamental, seasonal flowering, and indoor plants.

CO:4 Explain the characteristics, economic importance, and food-related applications of algae, fungi, and moulds.

Bachelor of Science (Home Science) Semester-V (Session 2026-2027)

Course Title: Applied Botany and Home Gardening

Course Code: BHSM-5075

(Theory)

Time: 3 Hrs

Credits (L-T-P):2-0-0

Max. Marks: 100

Theory: 50

Practical: 20

CA: 30

Instructions for the Paper Setters:

Eight questions of equal marks (12 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

Unit-I

Gardening

Layout of a Garden

Soil preparation – digging, tillage, drainage, watering and weeding.

Manures and fertilizers

Propagation of plants

Seed propagation

Vegetative propagation by natural and artificial methods (Bulbs, Rhizomes, suckers,

Runners, Tubers, Budding and grafting)

Unit-II

Kitchen Garden

Principle of planning and cultivation of vegetables with reference to potato, tomato, radish, Cauliflower, brinjal, pea and spinach.

Unit-III

Lawn and Hedges

Principle of planning of lawn and hedges

Brief description of care and cultivation of ornamental plants.

Indoor Plant: Care and cultivation of seasonal flowers

Care and cultivations of common indoor plants.

Unit-IV

General characteristics, morphology and economic importance: algae, fungi and moulds.

Algae as Nutraceuticals and Functional Foods: Spirulina, Chlorella, Omega-3-fatty acids, proteins

Fungi in Food Biotechnology: Bread, cheese, fermented foods

Suggested Readings:

1. Basic Gardening Gemmell Alam Penguin books publication.
2. B. Choudhary: Vegetables (National Book of India, New Delhi 1979)
3. Breikell C. 1993, Step by Step Gardening Technique (Royal Horticultural Society's Encyclopedia of Practical Gardening).
4. Dutta A.C. Botany for Degree Students (Oxford University Press, New Delhi 1970)

5. Gangullee H.C. Dass, K.S. Dass, K.S. Dutta C: College Botany Vol. I (New Central Book Agency Calcutta 1991)
6. Gopalaswamianger K.S. 1991 Complete Gardening in India (Messers Nagaraj and Co., Madras).
7. H.T. Harman and D Keter: Plant Propagation, Principles and Practices (Prentice Hall of India Pvt. Ltd. New Delhi 1979).
8. Hind Book of Agriculture: ICAR, New Delhi 1987.
9. J.L. Shreemali Economic Botany (Har Anand Publication, New Delhi 1995)
10. O.P. Sharma: Hill's Economic Botany 2006 Tata McGraw-Hill Publishing Co. Ltd.
11. James Paris Gardening Book Bundles.

Bachelor of Science (Home Science) Semester-V (Session 2026-2027)

Course Title: Applied Botany and Home Gardening

Course Code: BHSM-5075

(Practical)

Course outcome: -

After passing this course the student will be able to:

CO:1 Identify different tools to be used in soil preparation.

CO:2 Understand the use of different plant parts for plant propagation.

CO:3 Maintain different plants in the garden.

CO:4 Evaluate the role of algae and fungi in the development of nutraceuticals, functional foods, and fermented food products.

Bachelor of Science (Home Science) Semester-V (Session 2026-2027)

Course Title: Applied Botany and Home Gardening

Course Code: BHSM-5075

(Practical)

Time: 3 Hrs

Max. Marks: 20

Credits (L-T-P):0-0-1

Note: Paper will be set on the spot by the examiner.

1. Study of garden tools and accessories.
2. Identification of different types of plants i.e. vegetable flowers, ferns and ornamental plants.
3. Preparation of soil digging tillage drainage watering and weeding.
4. To prepare and manuring a seed bed for raising seedlings.
5. To prepare a bed for sowing potatoes and cultivate them.
6. To prepare a plot for raising seedlings.
7. To prepare a pot for repotting.
8. To prepare a plot and cultivate seasonal vegetable (as in theory).
9. Plant propagation.
 - a) From seeds guiding rules for seed sowing.
 - b) Vegetative propagation by cutting and grafting.
 - c) Maintenance of plants
 - d) Use of pesticides and fungicides
 - e) Identification of slides of algae fungi and moulds.

Project: Algae and Fungi in Food Science: A Comparative Study of Nutraceuticals and Fermented Foods.

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1. Basic Gardening Gemmell Alam Penguin books publication.
2. B. Choudhary: Vegetables (National Book of India, New Delhi 1979)
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