

SHRI LAL BAHADUR SHASTRI DEGREE COLLEGE, GONDA

(Affiliated to Dr. Ram Manohar Lohiya Avadh University,
Ayodhya, (U.P))



Department of Botany

Floriculture

Certificate course

2022-2023

From

, Prof. S.K Srivastava

Department of Botany

Shri Lal Bahadur Shastri Degree College, Gonda.

To,

The Principal,

Shri Lal Bahadur Shastri Degree College, Gonda.

Sub: Proposal for Certificate Course in floriculture

Respected Sir,

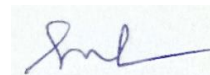
With reference to above mentioned subject, I am submitting herewith the proposal to conduct certificate course in Floriculture for the session 2022-2023 by the Department of Botany of our college. This course will be helpful to the students to acquire knowledge about Cutting, Grafting, budding, Layering, etc.

Kindly approve this course for B.Sc. and M.Sc. students and oblige.
with regards.

Date : 05/07/2022

Place: S.L.B.S. Gonda

Sincerely your's



(Prof. S.K. Srivastava)

Head department of botany

Enclosure: 1. Proposal.
2. Curriculum & Design for the Course.

SHRI LAL BAHADUR SHASTRI DEGREE COLLEGE, GONDA

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Proposal for conducting Short Term Certificate Courses

1. Basic information about the applicant department:

- ❖ **Name of the College:** : Shri Lal Bahadur Shastri Degree College, Gonda
- ❖ **Complete Postal Address of College:** : Civil Lines, U.P.- 271003.
- ❖ **Name of the Department:** : Botany

2. Details of Course Proposal:

- ❖ **Name of the course** : Certificate Course in Floriculture
- ❖ **Target Group** : Under Graduate /Post Graduate Students
- ❖ **Duration of the Course** : 30 Hrs.
- ❖ **Medium of Instructions** : Hindi/English
- ❖ **No. of candidates to be registered** : 113

3. Details of the faculty:

- Whether college has any degree/diploma YES (UG/ PG Certificate Course)
related to the proposed course: Floriculture as subject
- Whether the course is prepared by experts YES (By Departmental Faculty)

From related field:

- Information of Course Coordinator (To be appointed for the course)

Name	Department	Qualification	Experience
Prof.S.K Srivastava	Botany	M.Sc. Ph.D.	32 years

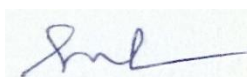
- Information of Faculty Members (To be appointed for the course)

Sr. No	Name of Faculty Member	Qualification	Experience (In Years)
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01	Prof. S.K Srivastava	M.Sc. Ph.D.	32 years
02	Dr. Rekha Sharma	M.Sc. Ph.D.	30 years
03	Dr. Sanjay Kumar	M.Sc. Ph.D.	3.8 years
04	Dr. Priyanka Srivastava	M.Sc. Ph.D.	3.5 years
05	Mr. Krishna Mohan Ttripathi	M.Sc. B.Ed.	2 years
06	Mr. Drinkal Yadav	M.Sc. B.Ed.	2 years

4. Details of the Physical Infrastructure Needed / Available for The Course:

Classroom:	Available
Books / Reading Material:	Yes, available in the Central/ Departmental Library of the College.
Equipment's:	All the Necessary Equipment's Required for the Course are available
Any Other:	The College has its own Computer Laboratory with Internet Connection.



(Signature of the course coordinator)



(Signature of the Head of the Department)

SHRI LAL BAHADUR SHASTRI DEGREE COLLEGE, GONDA

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Department of Botany

(Certificate Course in Floriculture)

Certificate Course

Syllabus 2022-2023

Floriculture

Unit I

Theories of Floriculture

(13 Lectures)

Agrometeorology:

Importance of different elements of weather and climate in agriculture – rainfall, temperature, humidity, sunshine, wind speed and direction.

Weather forecast and its implication.

Basic knowledge on plant biology

Morphology, Physiology and other preliminary knowledge. Soil fertility, productivity and its maintenance. Concept and practices of integrated nutrient management system.

Different types of manures such as vermi-compost, FYM, Sludge, Poultry manure: Their role in improving soil and soil fertility.

Green manure – Role of Green Manuring in crop production. Cultivation of important green manure crops such as Dhaincha, Kalai, Cowpea, Sunhemp, Glyricidia.

Use of bio-fertilizer as *Azolla*, Blue-green algae, *Rhizobium*, *Azotobactor*, Phosphate solubilizing bacteria and mycorrhiza their propagation and application.

Essential plant nutrient elements - Role of Major and Minor plant nutrient elements. Deficiency symptoms.

Chemical Fertilizers: Classification (both macro and micronutrient containing fertilizers), nutrient contents. Deficiency symptoms.

Application of fertilizers and soil amendments.

Unit-II

(12 Lectures)

1. Fundamentals of floriculture:

Methods of seeds & bulbs collection and storing.

Post-harvest technology of cut flowers, seeds, Bulbs.

Irrigation & Water management. Including micro irrigation techniques like drip, sprinkler, fogger, fustigation, etc.

2. Nursery and seed production:

Introduction, Importance of Nursery and seed production, selection of site for open and covered culture.

Soil preparation, soil sterilization, propagating structures, preparation of soil mixture for seed sowing and pot plants.

Seed production methods for pure seed, open seed, cross pollinated seed and hybrid seed, harvesting, cleaning, seed testing, germination test and packing.

Seedling production methods for annuals another herbaceous ornamental and their methods of packing.

3. Commercial flowers:

Scope, importance, cultivars, soil and climatic requirements, propagation, nutrition and water management, management of insect pests, diseases and weeds, specific cultural operations, harvesting, grading, pulsing, storage.

Packing of the following commercially important flowers: For loose flowers: Chrysanthemums, Rose, *Barleria*, Balsam, Marigold, China aster, Dahlia, *Hibiscus*.

For long stem cut flowers: Perennials: Rose, *Nyctanthes* Gladiolus, Clitoria, Carnation, Gerbera, Passiflora, Water lilies, *Lilium amaryllis*, Adenium, Tulip, Dahlia, *Narcissus*.

Annuals: *Antirrhinum*, Aster, Calendula *Delphinium*, Impatiens *Dianthus*, *Centauria*, *Helichrysum*, Helianthus Stock, Candytuft, Zinia, Ipomea, Gallardia, Catharanthus, Portulaca, Celosia, Cosmos, Gomphrena, Torenia, Chrysanthemum.

Practicals

(05 Practical)

- Identification of meteorological instruments.
- Demonstration for recording of
 - a) Rainfall, b) Temperature, c) Humidity,
 - d) Wind direction and speed, e) Evaporation and
 - f) Sunshine hours.
- Germination, parts of roots, stems flowers and seeds. Identification of families/varieties, Soil fertility, Manures and Fertilizers, Fertility Management
- Crop rotation and adoption of appropriate cropping systems.
- Environmental factors, photoperiodism, dormancy, growth regulators.
- Propagation by cutting, budding, grating.
- Handling of seeds, bulbs, cut flowers, nursery plants, pot plants.
- Studying and identification of seeds & testing viability.
- Seed treatment, soil treatment before sowing.
- Studying seed sowing in beds and containers.
- Studying different media, soil mixture for raising plants by seeds, cutting.
- Methods of different types of seed sowing.
- Transplanting or potting the seedling in the pots, polythene bags and in other containers.
- Studying of floricultural tools used in maintenance and in propagation.
- Propagation by runners, suckers, off shoots & other vegetative means. Protected Cultivation of flowers
Identification and study of poly house, shed net house, mulching.

Course description, eligibility criteria and admission procedure

Floriculture is an old age farming activity in India having immense potential for generating gainful self-employment among small and marginal farmers. In the recent years it has emerged as a profitable agri-business in India and worldwide as improved standards of living and growing consciousness among the citizens across the globe to live in environment friendly atmosphere has led to an increase in the demand of floriculture products in the developed as well as in the developing countries worldwide. The production and trade of floriculture has increased consistently over the last 10 years. In India, Floriculture industry comprises flower trade, production of nursery plants and potted plants, seed and bulb production, micro propagation and extraction of essential oils. Though the annual domestic demand for the flowers is growing at a rate of over 25% and international demand at around Rs 90,000 crore India's share in international market of flowers is negligible. However, India is having a better scope in the future as there is a shift in trend towards tropical flowers and this can be gainfully exploited by country like India with high amount of diversity in indigenous flora.

After liberalization the Government of India identified floriculture as a sunrise industry and accorded it 100 percent export-oriented status. The liberalization of industrial and trade policies paved the way for the development of export-oriented production of cut flowers.

The new seed policy has already made it feasible to import planting material of international varieties. Floriculture products mainly consist of cut flowers, pot plants, cut foliage, seeds bulbs, tubers, rooted cuttings and dried flowers or leaves. The important floricultural crops in the international cut flower trade are rose, carnation, chrysanthemum, gerbera, gladiolus, orchids, anthurium, tulip and lilies.

Year of Implementation (2022-23)

Duration: 30 Days

Start in the month of November every year

Strength: 113 students

(Students have basic knowledge of agronomy and plant science)

Course Coordinator: Dr. S.K. Srivastava

Eligibility criteria: Students studying in U.G. (B. Sc.) and P.G. (M.Sc.) classes of the Shri L.B.S. Degree College can join the program.

Admission Procedure

Students willing to join the course can apply on plain paper writing their name, CR. No., Aadhar No., Mobile No., Father's name and Last education details. Completely filled form can be submitted in the department to Mr. Mukta Ram, Lab Assistant.

Assessment and Evaluation Procedure

The assessment was done after the completion of the course. The MCQ (Multiple Choice Question) test is conducted in which students securing 60% marks will be awarded with a certificate of A grade. Less than that are under the category of grade B. 75% attendance will also be mandatory for obtaining A grade.

Course Outcomes

After the completion of the course, the students can work in floriculture industry as a better option for his/her career because there is high demand of the flowers and the skill expertise in the world. Marketing can also be done for cut and dried flower and foliage.

The floriculture has become one of the extreme focus segments for development of export by the Government of India. The growth of floriculture industry earlier was very slow but there has been a significant rise in floriculture export in India. India exports flowers to many countries like Netherlands, Japan and Germany.

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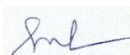
Department of Botany

(Certificate Course in Floriculture)

Certificate Course

Syllabus 2022-2023

Course Name	Name of Paper	Lecturers/Week	Total No. of Lectures	Theory	Practical	Total Marks
Certificate Course	Floriculture	06	30	25	05	100



(Signature)

Faculty of Botany



(Signature)

Principal

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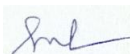
Department of Botany
(Certificate Course in Floriculture)

Ref. No.

Date. 25/08/2022

Notice

All the students of Botany are hereby informed that the department of Botany is going to organize an add-on course under the title "Floriculture". Students willing to join the course register their names with the teacher's in charge.



(Signature)
Faculty of Botany



(Signature)
Principal



Dr. S.K Srivastava introducing about techniques of floriculture.



Students Performing vegetative propagation in botanical garden

