

Department of Botany
Self-Study Report (SSR) - Criterion-1

1	Department/Directorate/Centre/Institute:	Botany	
2	Name of the Programme Offered:	MSc; PhD	
3	Departmental website link of the complete/updated syllabus:	chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://botany.uok.edu.in/Files/bdcfcf70-294a-4c43-95ed-70caf685f3b2/Menu/2021-PG_syllabus_final_-_2021_a0a11ef4-705a-49b3-8838-61209ab83592.pdf	
4	Number of Courses in the Programme:	42	
5A	Number of New Courses introduced in the Programme since 2019:	05	
5B	List of New Courses introduced since 2019:		
	<i>Course Code</i>	<i>Course Title</i>	<i>Brief Description</i>
	BOT-21307DCE	Plant Stress Biology and Molecular Genetics	To understand how different plants respond to different environmental cues at morphological, physiological and molecular levels.
	BOT-21309-DCE	Applied Crop Pyhsiology	To obtain knowledge about basic and applied concept of water relations and mineral nutrition of plants, different processes and mechanisms of photosynthesis.
	BOT-21310-DCE	Soil Science and Plant Nutrition	To build the fundamental knowledge and skills of students within the different areas of Soil Science and Plant Nutrition to enhance their understanding of the soil and its management for better plant growth.
	BOT-21409GE	Biofertilizers and Organic Farming for Sustainable Agriculture	To obtain knowledge about significance of using organic farming and biofertilizers for sustainable agriculture.
	BOT-21001OE	Basics of Biodiversity	To understand the basic concepts of biodiversity, make them understand its precious values for humanity.
5C	Departmental website link in support of New Courses introduced in the Programme since 2019 .	https://botany.uok.edu.in/Main/Default.aspx#?active=lnk4	

6A	Dates of syllabus revisions during the last five years. (2019-2023)	25-10-2021
6B	Departmental website link in support of syllabus revisions.	https://botany.uok.edu.in/Main/Default.aspx#?active=lnk4
7	Are Programme Outcomes (POs) clearly mentioned in the syllabus?	Y
8	Are the Course Outcomes (COs) mentioned for each course of the programme?	Y
9A	Does POs & COs have relevance to local, regional & global developmental needs?	Y
9B	List of courses addressing Local Needs:	
	<i>Course Code</i>	<i>Course Title</i>
	<i>Brief Justification</i>	
	BOT- 21101CR	Plant Taxonomy
		To obtain knowledge about the principles, and methods of plant taxonomy including botanical classification, nomenclature and identification; and also inculcate understanding about the local flora.
	BOT- 21102CR	Microbiology, Fungi and Plant Pathology
		To obtain basic knowledge about diversity, biology, taxonomy, ecological and economic importance of microbes for addressing local needs.
	BOT- 21202CR	Ecology
		In this course the students will come to know about the structural and functional attributes of ecological organizations at population, community and ecosystem levels at local as well as national scales.
	BOT- 21403CR	Plant Resource Utilization
		To get knowledge about the concept, utilization and role of plant diversity and know about the use of these plants for food, fodder and medicine which are also locally available.
	BOT-21106-DCE	Mushroom Cultivation Technology
		To get knowledge about the identification of various types and categories of mushrooms, examine various types of processing food technologies associated with mushroom industry and mushroom economics available at local scales.
	BOT-21107-DCE	Medicinal Plants and Herbal Resource Management
		To understand the use of plants and plant products encountered in everyday life and appreciate the diversity of plants and plant products in human use.

	BOT-21205-DCE	Biodiversity and Conservation Biology	To get acquainted with the concept, concerns and conservation of biodiversity, values of biodiversity for human welfare and get knowledge about the hitherto untapped potential of local biodiversity in sustainable regional development.
	BOT-21207-DCE	Applied Plant Pathology	To understand principles of plant pathology and pathogenesis management of plant diseases caused by microbial pathogens.
	BOT-21306-DCE	Invasion Biology	To better understanding of the mechanism of plant invasions, their environmental impacts and idea about their management
	BOT-21005GE	Weed Management	To understand different types of local weeds that hamper the growth of plants and will learn about their management.
	BOT-21002OE	Commercial Floriculture	To appreciate the role of ornamentals in improving environment and quality of life.
	BOT-21003OE	Bioenergy	To get awareness about the concept of producing alternate ecofriendly liquid and gaseous biofuels from plant bioresources.
	BOT-21005OE	Biopesticides and Integrated Pest Management	To understand basic concepts about pesticides, limitation of using pesticides and will get knowledge about significance of biopesticides.
	BOT-21006GE	Aquatic Ecosystem Management	To understand the concept of structure and function of lakes and wetlands of Kashmir Himalaya.
9C	List of courses addressing Regional Needs:		
	<i>Course Code</i>	<i>Course Title</i>	<i>Brief Justification</i>
	BOT- 21102CR	Microbiology, Fungi and Plant Pathology	To obtain basic knowledge about diversity, biology, taxonomy, ecological and economic importance of microbes for addressing local needs.
	BOT- 21202CR	Ecology	To know about the structural and functional attributes of ecological organizations at population, community and ecosystem levels at local as well as national scales.
	BOT- 21403CR	Plant Resource Utilization	To get knowledge about the concept, utilization and role of plant diversity to make them understand about the use of these plants for food, fodder and medicine which are also locally available.

	BOT-21106-DCE	Mushroom Cultivation Technology	To identify various types and categories of mushrooms, examine various types of processing food technologies associated with mushroom industry and mushroom economics available at local scales.
	BOT-21107-DCE	Medicinal Plants and Herbal Resource Management	To understand use of plants and plant products encountered in everyday life and appreciate the diversity of plants and plant products in human use.
	BOT-21205-DCE	Biodiversity and Conservation Biology	To get acquainted with the concept, concerns and conservation of biodiversity, values of biodiversity for human welfare and get knowledge about the hitherto untapped potential of local biodiversity in sustainable regional development.
	BOT-21207-DCE	Applied Plant Pathology	To understand principles of plant pathology and pathogenesis management of plant diseases caused by microbial pathogens.
	BOT-21306-DCE	Invasion Biology	To have better understanding of the mechanism of plant invasions, their environmental impacts and idea about their management
	BOT-21005GE	Weed Management	To understand different types of weeds that hamper the growth of plants and will learn about the management of weeds through integrated and coordinated weed management strategies
	BOT-21002OE	Commercial Floriculture	To appreciate the role of ornamentals in improving environment and quality of life.
	BOT-21005OE	Biopesticides and Integrated Pest Management	To understand basic concepts about pesticides, limitation of using pesticides and will get knowledge about significance of biopesticides.
	BOT-21006GE	Aquatic Ecosystem Management	To understand the concept of structure and function of lakes and wetlands of Kashmir Himalaya.
9D	List of courses addressing Global Needs:		
	<i>Course Code</i>	<i>Course Title</i>	<i>Brief Justification</i>
	BOT- 21101CR	Plant Taxonomy	This course is considered as fundamental course for studying any Botany course globally.
	BOT- 21102CR	Microbiology, Fungi and Plant Pathology	This course is considered as fundamental course for studying any Botany course globally.

BOT- 21103CR	Algae and Bryophyta	This course is considered as fundamental course for studying any Botany course globally.
BOT- 21201CR	Pteridophyta and Gymnosperms	This course is considered as fundamental course for studying any Botany course globally.
BOT- 21202CR	Ecology	This course is considered as fundamental course for studying any Botany course globally.
BOT- 21203CR	Cell and Molecular Biology	This course is considered as fundamental course for studying any Botany course globally.
BOT- 21301CR	Reproductive and Developmental Biology of Angiosperms	This course is considered as fundamental course for studying any Botany course globally.
BOT- 21302CR	Cytogenetics and Genetics	This course is considered as fundamental course for studying any Botany course globally.
BOT- 21303CR	Plant Metabolism	This course is considered as fundamental course for studying any Botany course globally.
BOT- 21401CR	Plant Physiology	This course is considered as fundamental course for studying any Botany course globally.
BOT- 21402CR	Plant Tissue Culture and Genetic Engineering	This course is considered as fundamental course for studying any Botany course globally.
BOT- 21403CR	Plant Resource Utilization	This course is considered as fundamental course for studying any Botany course globally.
BOT-21105-DCE	Biostatistics and Biotechniques	To comprehend the statistical tests and scientific techniques those are required everywhere for data analysis.
BOT-21106-DCE	Mushroom Cultivation Technology	To identify various types and categories of mushrooms, and examine various types of processing food technologies associated with mushroom industry and mushroom economics being used globally.
BOT-21107-DCE	Medicinal Plants and Herbal Resource Management	To understand origin, evolution, domestication, cultivation and utilization of economically important plants plant products encountered in everyday life.

	BOT-21205-DCE	Biodiversity and Conservation Biology	To get acquainted with the concept, concerns and conservation of biodiversity, values of biodiversity for human welfare and get knowledge about the hitherto untapped potential of local biodiversity in sustainable regional development.
	BOT-21206-DCE	Applied Phycology	To exploit the knowledge of algae for production of biofertilizers, bio-fuels, food, fodder and in pharmaceutical industries.
	BOT-21207-DCE	Applied Plant Pathology	To understand principles of plant pathology and pathogenesis of globally known pathogens.
	BOT-21305-DCE	Applied Ecology	To have understand the major global ecological and environmental problems.
	BOT-21306-DCE	Invasion Biology	To understand the mechanism of plant invasions, their environmental impacts and idea about their management
	BOT-21307-DCE	Plant Stress Biology and Molecular Genetics	To get acquainted with knowledge about how different how plants respond to different environmental cues at morphological, physiological and molecular levels.
	BOT-21308-DCE	Crop Genetics and Molecular Breeding	To understand the role of plant breeding in crop improvement.
	BOT-21309-DCE	Applied Crop Pyhsiology	To know about basic and applied concept of various physiological mechanisms in plants and get acquainted about chemical control of growth regulators in agriculture and horticulture.
	BOT-21310-DCE	Soil Science and Plant Nutrition	To build the fundamental knowledge and skills within the different areas of Soil Science and Plant Nutrition.
10A	Does the Programme offer focus on Employability/ Entrepreneurship/ Skill development courses? (Y/N)		Y
10B	List of Employability Courses:		
	<i>Course Code</i>	<i>Course Title</i>	<i>Brief Justification</i>
	BOT-21402CR	Plant Tissue Culture and Genetic Engineering	To understand the basic knowledge of plant cell and tissue culture, will apply their knowledge of plant tissue culture in various for conservation of economically and medicinally important plants.
	BOT-21004 GE	Commercial Plant Propagation	To enable students to know about the various techniques in plant propagation and its commercial utility.

BOT-21005GE	Weed Management	To understand different types of weeds that hamper the growth of plants and will learn about the management of weeds through integrated and coordinated weed management strategies to generate employment.
BOT-21002OE	Commercial Floriculture	To impart training on floriculture and explore the market linkages for promoting Start-up and Entrepreneurship opportunities in floriculture sector.
BOT-21003OE	Bioenergy	To get awareness about the concept of producing alternate eco-friendly liquid and gaseous biofuels from plant bio-resources to generate self-employment.
BOT-21005OE	Biopesticides and Integrated Pest Management	To understand basic concepts about pesticides, limitation of using pesticides and will get knowledge about significance of bio pesticides.
BOT-21106-DCE	Mushroom Cultivation Technology	To identify various types and categories of mushrooms, examine various types of processing food technologies associated with mushroom industry and mushroom economics available at local scales to generate self-employment..
BOT-21107-DCE	Medicinal Plants and Herbal Resource Management	To understand use of plants and plant products encountered in everyday life and appreciate the diversity of plants and plant products in human use to generate self-employment.

10C

List of **Entrepreneurship Development Courses:**

<i>Course Code</i>	<i>Course Title</i>	<i>Brief Justification</i>
BOT-21402CR	Plant Tissue Culture and Genetic Engineering	To understand the basic knowledge of plant cell and tissue culture, will apply their knowledge of plant tissue culture in various for conservation of economically and medicinally important plants.
BOT-21004 GE	Commercial Plant Propagation	To enable students to know about the various techniques in plant propagation and its commercial utility.
BOT-21002OE	Commercial Floriculture	To appreciate the role of ornamentals in improving environment and quality of life.
BOT-21106-DCE	Mushroom Cultivation Technology	To identify various types and categories of mushrooms, examine various types of processing food technologies associated with mushroom industry and mushroom economics available at local scales.

	BOT-21107-DCE	Medicinal Plants and Herbal Resource Management	To understand use of plants and plant products encountered in everyday life and appreciate the diversity of plants and plant products in human use.
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10D

List of **Skill development Courses:**

<i>Course Code</i>	<i>Course Title</i>	<i>Brief Justification</i>
BOT-21402CR	Plant Tissue Culture and Genetic Engineering	To understand the basic knowledge of plant cell and tissue culture, will apply their knowledge of plant tissue culture in various for conservation of economically and medicinally important plants.
BOT-21004 GE	Commercial Plant Propagation	To enable students to know about the various techniques in plant propagation and its commercial utility.
BOT-21005GE	Weed Management	To understand different types of weeds that hamper the growth of plants and will learn about the management of weeds through integrated and coordinated weed management strategies
BOT-21002OE	Commercial Floriculture	To impart training on floriculture and explore the market linkages for promoting Start-up and Entrepreneurship opportunities in floriculture sector.
BOT-21003OE	Bioenergy	To get awareness about the concept of producing alternate ecofriendly liquid and gaseous biofuels from plant bioresources.
BOT-21005OE	Biopesticides and Integrated Pest Management	To understand basic concepts about pesticides, limitation of using pesticides and will get knowledge about significance of biopesticides.
BOT-21106-DCE	Mushroom Cultivation Technology	To develop initial skills for cottage level mushroom production, leading to the establishment of commercial mushroom farms
BOT-21107-DCE	Medicinal Plants and Herbal Resource Management	The course will sensitise the students towards the opportunities in Medicinal & Aromatic Plants Sector and inculcate the culture of Medi-startups in Kashmir

11A

Does the programme have courses addressing Professional ethics/ gender/ human values/ environment/ sustainability & other value framework enshrined in NEP2020/etc. (Y/N)

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11E	List of courses addressing Environment Issues:		
	<i>Course Code</i>	<i>Course Title</i>	<i>Brief Justification</i>
	BOT- 21202CR	Ecology	To know about the structural and functional attributes of ecological organizations at population, community and ecosystem levels at local as well as national scales.
	BOT-21205-DCE	Biodiversity and Conservation Biology	To get acquainted with the concept, concerns and conservation of biodiversity, values of biodiversity for human welfare and get knowledge about the hitherto untapped potential of local biodiversity in sustainable regional development.
	BOT-21306-DCE	Invasion Biology	To understand the mechanism of plant invasions, their environmental impacts and idea about their management
	BOT-21005GE	Weed Management	To understand different types of weeds that hamper the growth of plants and will learn about the management of weeds through integrated and coordinated weed management strategies
	BOT-21003OE	Bioenergy	To get awareness about the concept of producing alternate ecofriendly liquid and gaseous biofuels from plant bioresources.
	BOT-21005OE	Biopesticides and Integrated Pest Management	To understand basic concepts about pesticides, limitation of using pesticides and will get knowledge about significance of biopesticides.
	BOT-21006GE	Aquatic Ecosystem Management	To understand the concept of structure and function of lakes and wetlands of Kashmir Himalaya.
11F	List of courses addressing Sustainability issues:		
	<i>Course Code</i>	<i>Course Title</i>	<i>Brief Justification</i>
	BOT- 21403CR	Plant Resource Utilization	To get knowledge about the concept, utilization and role of plant diversity to make them understand about the use of these plants for food, fodder and medicine which are also locally available.
	BOT-21106-DCE	Mushroom Cultivation Technology	To identify various types and categories of mushrooms, examine various types of processing food technologies associated with mushroom industry and mushroom economics available at local scales.

	BOT-21107-DCE	Medicinal Plants and Herbal Resource Management	To understand use of plants and plant products encountered in everyday life and appreciate the diversity of plants and plant products in human use.
	BOT-21205-DCE	Biodiversity and Conservation Biology	To get acquainted with the concept, concerns and conservation of biodiversity, values of biodiversity for human welfare and get knowledge about the hitherto untapped potential of local biodiversity in sustainable regional development.
	BOT-21306-DCE	Invasion Biology	To understanding of the mechanism of plant invasions, their environmental impacts and idea about their management
	BOT-21005GE	Weed Management	To understand different types of weeds that hamper the growth of plants and will learn about the management of weeds through integrated and coordinated weed management strategies
	BOT-21002OE	Commercial Floriculture	To appreciate the role of ornamentals in improving environment and quality of life.
	BOT-21003OE	Bioenergy	To get awareness about the concept of producing alternate ecofriendly liquid and gaseous biofuels from plant bioresources.
	BOT-21005OE	Biopesticides and Integrated Pest Management	To understand basic concepts about pesticides, limitation of using pesticides and will get knowledge about significance of biopesticides.
	BOT-21006GE	Aquatic Ecosystem Management	The students will understand the concept of structure and function of lakes and wetlands of Kashmir Himalaya.
11G	List of courses addressing Other Value Framework enshrined in NEP2020/etc.:		
	<i>Course Code</i>	<i>Course Title</i>	<i>Brief Justification</i>
16A	Does the programme have Field Projects/ Research Projects /Internship in the programme? (Y/N)		Y
16B	Details of components of Field Projects / Research Projects / Internships implemented during last five years (2019-2023)		

	<i>Course Code</i>	<i>Name of the course pertaining to field project</i>	<i>Number of Credits</i>	<i>Number of students undertaking course</i>	<i>Departmental website link to the relevant document</i>
	Bot-Proj.	Project Work	8	60 per year	https://botany.uok.edu.in/Main/Default.aspx#?active=lnk4
17	Any other Relevant Information:				

Head of the Department