



### List of New Course(s) Introduced

Department	: <i>Botany</i>
Programme Name	: <i>B.Sc. Honours</i>
<i>Academic Year : 2021-22</i>	

### *List of New Course(s) Introduced*

Sr. No.	Course Code	Name of the Course
01.	BOUBTG10	Global Climate change



**Minutes of Meetings (MoM) of Board of Studies (BoS)**

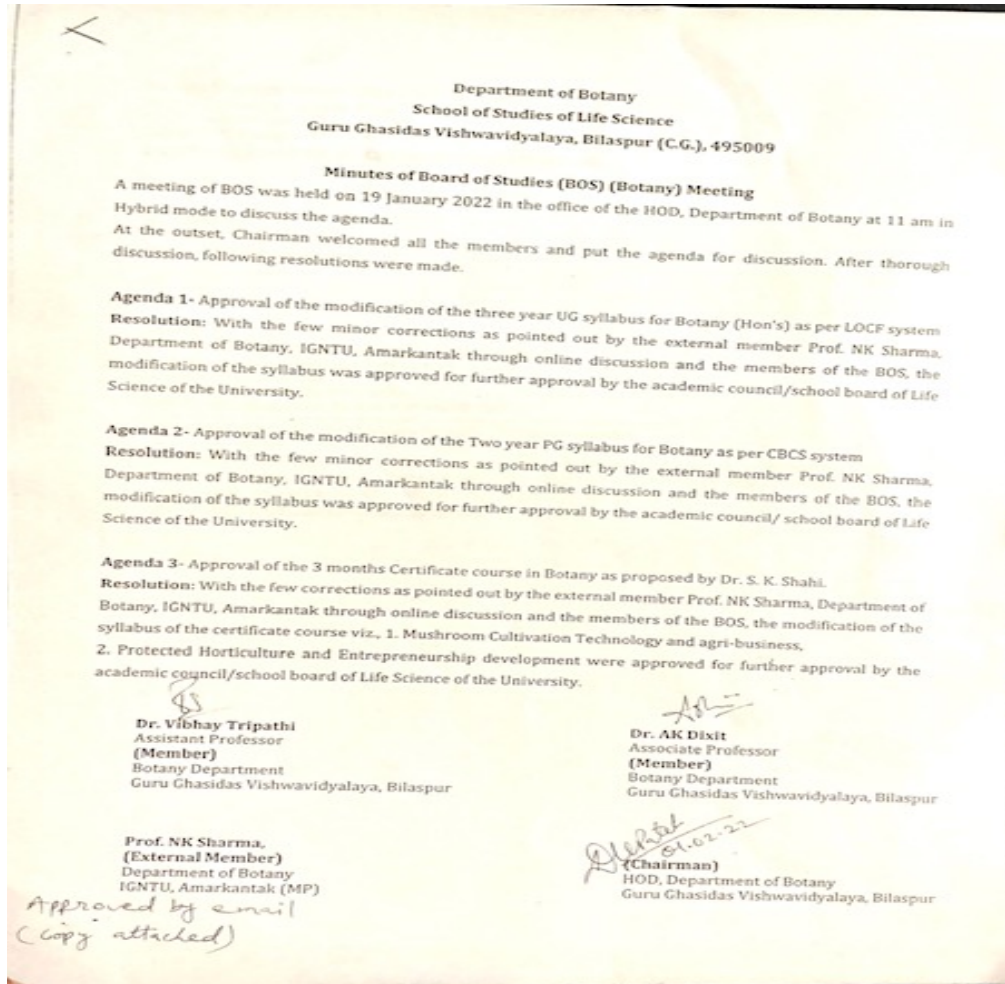
**Academic Year : 2021-22**

**School : School of Studies of Life Sciences**

**Department : Botany**

**Date and Time : Jan 19, 2022 - 11:00 AM**

**Venue : HoD Room**



विभागाध्यक्ष  
Head  
वनस्पति शास्त्र विभाग  
Department of Botany  
गुरु घासीदास विश्वविद्यालय (केन्द्रीय वि.वि.), बिलासपुर (छ.ग.)  
Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur (C.G.)

Signature & Seal of HoD



## Scheme and Syllabus

### SCHOOL OF SCIENCES: (LIFE SCIENCE) B.Sc. (BOTANY) Hon's

#### SEMESTER I

Semester	Course Opted	Course Code	Name of the course	Credit	Hour / week	End semester marks	Internal Marks	Total marks
Semester I	Core-1	BOUATT1	Phycology and Microbiology	4	4	70	30	100
	Core-1 Lab	BOUALT1	Lab based on core 1	2	4	70	30	100
	Core-2	BOUATT2	Bio-molecules and cell Biology	4	4	70	30	100
	Core-2 Lab	BOUALT2	Lab based on core 2	2	4	70	30	100
	Generic Elective-1 (GE-1)	BOUATG	Opted from the basket	4	4	70	30	100
	Generic Elective-1 Lab	BOUALG	Lab based on GE-1	2	4	70	30	100
	Ability Enhancement Compulsory Course-1 (AECC)	BOUATA1	English Communication	4*	4	70	30	100
	ECA	BOUALS1	ECA-Extracurricular activity/ Tour, Field visit/ Industrial training/ NSS/ Swachhta/ vocational Training/ Sports/ others	2	(2)	70	30	100
			TOTAL		24	28		

#### SEMESTER II

Semester II	Core-3	BOUBTT1	Mycology and Phytopathology	4	4	70	30	100
	Core-3 Lab	BOUBLT1	Lab based on core 3	2	4	70	30	100
	Core- 4	BOUBTT2	Archegoniate	4	4	70	30	100
	Core- 4 Lab	BOUBLT2	Lab based on core 4	2	4	70	30	100
	Generic Elective-2 (GE-IB)	BOUBTG	Elective from the Basket	4	4	70	30	100
	Generic Elective-2- Lab	BOUBLG	Lab based on GE-2	2	4	70	30	100
	Ability	BOUBTA2	Environmental Science	4*	4	70	30	100



Enhancement Compulsory Course-2 (AECC)								
ECA	BOUBLS1	ECA-Extracurricular activity/ Tour, Field visit/ Industrial training/ NSS/ Swachhta/ vocational Training/ Sports/ others	2	(2)	70	30	100	
		Total	24	28			800	
<b>SUMMER Internship: 15 days</b>	BOUBEF1	<b>Swayam/Swachhta / NSS / Industrial/ others</b>	<b>2</b>	<b>100</b>	70	30	100	

## Course offered by Botany

### (Course Basket)

#### Generic Electives

Sn	Course (General Electives)	Course code
1.	Environmental Technology	BOUBTG1
2.	Food Science	BOUBTG2
3.	Community Forestry	BOUBTG3
4.	Seed Technology	BOUBTG4
5.	Plant-Microbes Interaction	BOUBTG5
6.	Environmental Microbiology	BOUBTG6
7.	Environmental Monitoring and Management	BOUBTG7
8.	Global Environmental Issues	BOUBTG8
9.	Algal Biotechnology	BOUBTG9
10.	Global Climate change	BOUBTG10



## Syllabus

### Generic Elective Course X: Global Climate change

Course code: BOUATG10

(Credits: Theory-4, Practical-2)

**THEORY (Lectures: 60)**

#### Learning outcomes:

After completing this course the learner will be able to;

Develop understanding on the concept and issues of global environmental change

Analyse the causes and effects of depletion of stratospheric ozone layer

Examine the climate change and its effect on living beings

Understand the physical basis of natural green gashouse effect on man and materials

Evaluate human influenced driver of our climate system and its applications

#### Keywords:

Climate change, Ozone depletion, UV-B, Greenhouse effects, Atmospheric depositions, Eutrophication

#### Unit I

**5 lectures**

Global Environmental change issues.

#### Unit II

**9 lectures**

Stratospheric ozone layer: Evolution of ozone layer; Causes of depletion and consequences; Effects of enhanced UV-B on plants, microbes, animals, human health and materials; Global efforts for mitigation ozone layer depletion.

#### Unit III

**8 lectures**

Climate change: Greenhouse effects; causes; Greenhouse gases and their sources; Consequences on climate, oceans, agriculture, natural vegetation and humans; International efforts on climate change issues.

#### Unit IV

**8 lectures**

Atmospheric deposition: Past and present scenario; Causes and consequences of excessive atmospheric deposition of nutrients and trace elements; Eutrophication; Acid rain and its effects on plants, animals, microbes and ecosystems.

#### Lab (BOUAL10)



There are no structured class lab experiments involved. However the students are expected to visit various sites on the web, make teams for group-discussion indulge in debates, collect justifiable information from various sources, make historical report on the science, impact, future and politics behind climate change.

**Suggested Readings:**

1. Adger, N. Brown, K. and Conway, D. (2012). Global Environmental Change: Understanding the Human Dimensions. The National Academic Press.
2. Turekian. K. K. (1996). Global Environmental Change-Past, Present, and Future. Prentice-Hall.
3. Matthew. R. A. (2009). Jon Barnett, Bryan McDonald. Global Environmental Change and Human Security . MIT Press., USA.
4. Hester, R.E. and Harrison, R.M. (2002). Global Environmental Change. Royal Society of Chemistry