

**Department of Geology**  
**CERTIFICATE COURSE**  
**B.Sc. 1<sup>st</sup> and 2<sup>nd</sup> Year 2023-24 (NEP)**  
**APPLICATIONS OF REMOTE SENSING AND GIS**  
**Course Structure**


**Course Outcome:**

1. Students will be able to understand fundamentals of photogrammetry.
2. Student will be able to delineate associated features and interpret the landforms and other features.
3. Student will be able to use these techniques during field work, research such as water management analysis.
4. Student will be able to determine land use and land cover in various fields such as disaster management.
5. This course will provide platform to start the journey and excel in further understanding of remote sensing and GIS techniques.

**Duration of the Course:** The duration of the certificate course 30 hours.

**Course pattern:**

Certificate course will be focused on 17 hours of practical with hands on training and 14 hours of theory. Student has to pass a written test and submit assignment at the end of the course. Student will be awarded a certificate after completion of course.

  
Head  
Department of Geology  
Govindram Seksaria Science, College  
Belagavi - 590006

  
Head  
Department of Geology  
Govindram Seksaria Science, College  
Belagavi - 590006

  
IQAC Co-ordinator  
GSS College, Belagavi

# Department of Geology

## CERTIFICATE COURSE

B.Sc. 1<sup>st</sup> and 2<sup>nd</sup> Year 2023-24 (NEP)

## APPLICATIONS OF REMOTE SENSING AND GIS SYLLABUS


Units	Topics	Hours
<b>THEORY: 14 HOURS</b>		
1.	Elements of map, aerial photos: Types of scale, Latitude-Longitude and other information.	2
2.	Brief introduction to endogenic and exogenic process, types of landforms developed by wind, water and Glacier.	2
3.	Drainage patterns their types and significance in water management.	2
4.	Global Positioning System (GPS) basic principles and its field application.	2
5.	Aerial photography - Definition and terminologies: Swath, Overlap, Mosaic, Parts of Aerial photographs	2
6.	Electromagnetic spectrum. Visible spectrum, infrared, near infra-red, microwave. Band combinations MSS and FCC's.	2
7.	Remote Sensing - Definition and terminology. Types of satellites on the basis of their work. Indian satellites. Application of remote sensing and its significance in Geology, Disaster Management, Elements of image interpretation and keys	2
<b>PRACTICALS – 17 hours</b>		
1.	Exercise 1: Depth perception exercises	2
2.	Exercise 2: Stereo test and determination of scale	2
3.	Exercise 3: Identification of features on single vertical aerial photograph.	2
4.	Exercise 4: Interpretation of cultural details and preparation of land use map using satellite image.	2
5.	Exercise 5: Study of RADAR and SAR (Microwave) imagery and interpretation of features.	3
6.	Exercise 6: familiarization with Q-GIS for Digital Image Processing	3
7.	Exercise 7: GPS and GPS Essential app	3



Head  
Department of Geology  
Govindram Seksaria Science, College  
Belagavi - 590006

FACULTY:

- Mr. Suraj Mense



Head  
Department of Geology  
Govindram Seksaria Science, College.  
Belagavi - 590006



Course Coordinator



IQAC Co-ordinator  
GSS College, Belagavi



# Govindram Seksaria Science.

## ATTENDANCE

Class : B.Sc. I Year

Subject : Applications of Remote Sensing & GIS

Roll No.	Date of Lecture Name of Student	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
701	Pratik . Sutar .																	
702	Mulidhar . Hindimani .																	
751	Ankit kumar																	
754	Virek Patil																	
755	Shivani . Kulkarni																	
756	Anjali Basrikant																	
758	Rohit Patil																	
762	Pranav Jadhav																	
763	Ashishesh kushwaha .																	
765	Pradeep Navi																	
766	Rohit Yellurkar .																	
767	Prathmesh Patil																	
769	Shravan Patil																	
801	Ammara Hattaykul																	
802	Katigayani Itagi																	

*[Signature]*  
 Department of Geology  
 Govindram Seksaria Science College  
 Belagavi - 590016

# College, Belagavi. (P.U./ Degree)

## ROLL

TERM 2023-24

Name of Teacher

SSM

Roll No.	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Total Lecture attended
11124																								
12124																								
18124																								
19124																								
20124																								
21124																								
22124																								
23124																								
24124																								
25124																								
26124																								
27124																								
28124																								
29124																								
30124																								
31124																								
32124																								
33124																								
34124																								
35124																								
36124																								
37124																								
38124																								
39124																								
40124																								

*[Signature]*  
**IQAC Co-ordinator**  
**GSS College, Belagavi**

*[Signature]*  
 Department of Geology  
 Govindram Seksaria Science College  
 Belagavi - 590016



## Add on Certificate Course on "Ecotourism"

As per the request by students from UG and P.G. Departments, a certificate course on Ecotourism, open for all students of GSS and other colleges. The course was conducted by faculties of PG Department of Environmental Science, G.S.Sc College and outside experts. The same course was also used for publicity of PG Environmental Science department. Course was conducted between 23 July to 5<sup>th</sup> November 2024.

Maximum intake for the course is 25 students. Course work schedule -total 30 Hrs (4 hrs to 6 hrs per week. Timetable will be planned as per students availability)



The poster features a background illustration of a tropical landscape with palm trees, birds, and a person with a backpack and telescope. At the top, it displays the logos for Govindram Seksaria Science College, Belagavi and Biome. The main title is 'BIOME PRESENTS CERTIFICATE COURSE IN 'ECO-TOURISM'' with the start date 'Starting from 22nd July, 2024'. It is divided into sections for Course Highlights, Why Ecotourism?, Course Details, and Registration Deadline. A QR code is provided for registration, and the course is organized by the PG Department of Environmental Science.

**GOVINDRAM SEKSARIA SCIENCE COLLEGE, BELAGAVI**

**biome**  
Learn · Explore · Outreach

**BIOME PRESENTS  
CERTIFICATE COURSE IN  
'ECO-TOURISM'**

**Starting from  
22nd July, 2024**

**Course Highlights**

- Comprehensive Curriculum:** Learn about Principles of Ecotourism, Sustainable Tourism Practices, Conservation and Community Development and Ecotourism Entrepreneurship.
- Expert Instructors:** Gain insights from Industry professionals and environmental experts.
- Hands-On Experience:** Participate in field trips and practical projects that promote sustainable tourism.
- Global Perspectives:** Study ecotourism trends and case studies from around the world.

**Why Ecotourism?**

- Protect Natural Habitats:** Understand how responsible tourism can help conserve wildlife and natural ecosystems.
- Support Local Communities:** Learn how to create sustainable opportunities for local populations.
- Promote Awareness:** Be an advocate for environmental education and sustainable practices.
- Career Opportunities:** Open doors to careers in travel, conservation, and environmental management.

**Course Details:**


- Duration: 30 hrs**
- Start Date: 22 July, 2024**
- Course Fees: Rs. 2000/-**

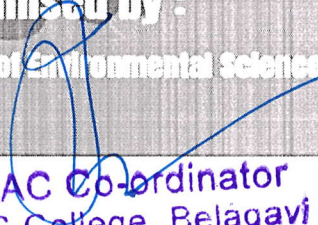
**Note:**  
The registration fees include: Certificate, T-Shirt, Pen-Drive.  
Field trip expenses are not included.

**Registration Deadline:**  
**20th July, 2024**  
**Limited seats: 25 seats only**  
(To be allotted on first come first serve basis)

  
(Scan the QR code for registration)

**Organised by :**  
**PG department of Environmental Science**

  
Co-ordinator,  
Postgraduate Department of  
Studies in Environmental Science  
G. S. Science College, Belagavi

  
IQAC Co-ordinator  
GSS College, Belagavi



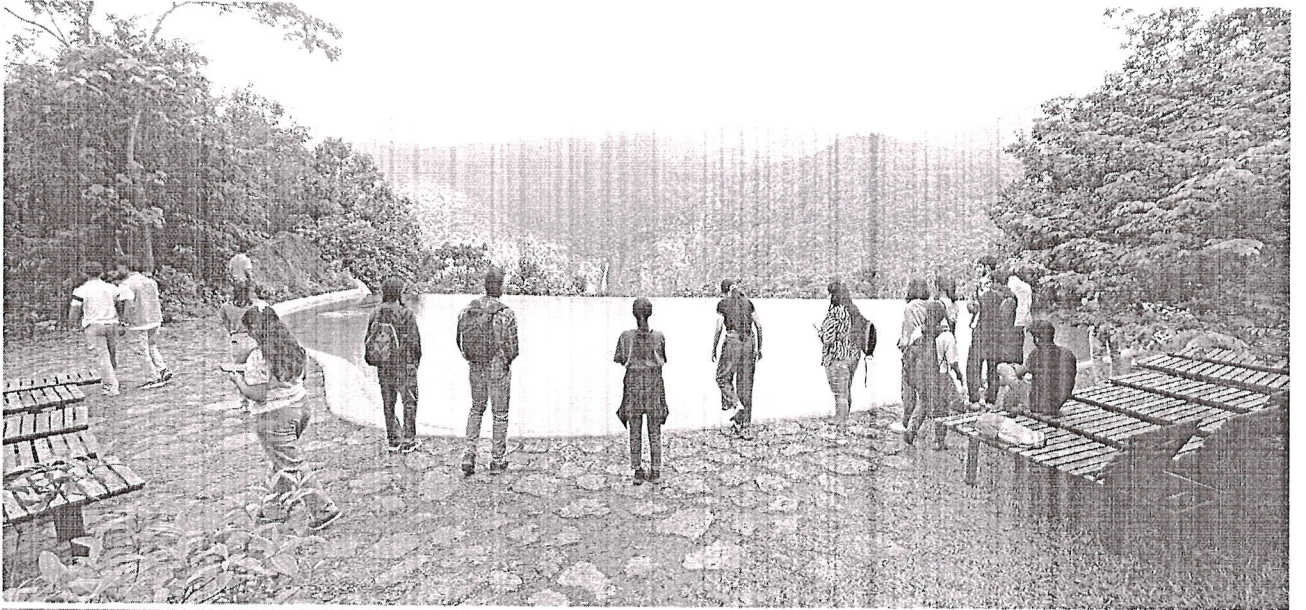
**Course Work Syllabus : 30 hrs**

<b>Introduction to Tourism –Environment – Ecotourism</b> Scope , Need, Opportunities	<b>3 hrs</b>
<b>Biodiversity –Ecology and Interpretation</b> Origin of Life, Earth, Biogeography, Landscapes, Ecosystems, Invertebrates, Herpatofauna, Ornithology, Mammals, Nature Interpretation	<b>12 hrs</b>
<b>Nature tourism - management &amp; Entrepreneurship</b> Concept, Case studies, Business model	<b>4 hrs</b>
<b>Development and sustainability and economics</b> Ecotourism, Community development Business sustainability, Financial management	<b>5 hrs</b>
<b>Ethical &amp; Legal framework</b> Legal frame work on Ecotourism, Tourism policy Ethical values, DO's and Don'ts	<b>2 hrs</b>
<b>Outdoor sessions : Amboli landscape, Chorla region, Swapnagandha Eco resorts etc.</b>	<b>5 hrs</b>

**Photographs of the classroom and field sessions**

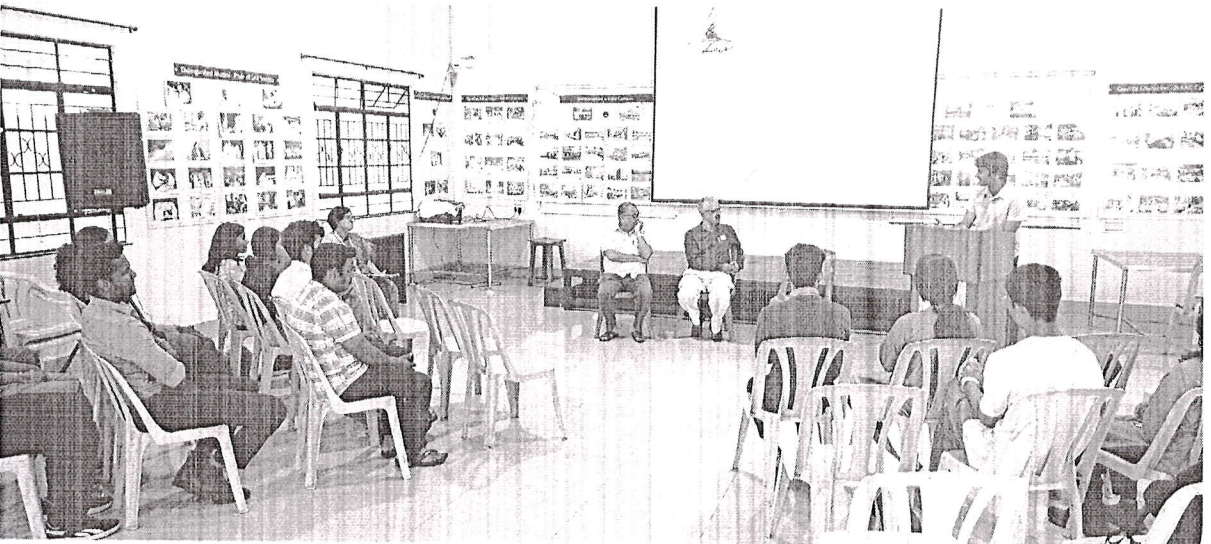






  
IQAC Co-ordinator  
GSS College, Belagavi





Valedictory session

  
IQAC Co-ordinator  
GSS College, Belagavi





SKE Society's  
GOVINDRAM SEKSARIA SCIENCE COLLEGE

Tilakwadi, Belagavi - 590006 | Accredited at 'A' Grade by NAAC

*This is to certify that*

*has successfully completed the certificate course in  
"Ecotourism", conducted by P.G. Department of  
Environmental Science and "BIOME"  
during the year 2023 - 2024.*

Vice Chairman, SKES

Co-ordinator,  
Postgraduate Department of  
Studies in Environmental Science  
Govindram Seksaria Science College, Belagavi

Principal, GSS College

GSS  
Belagavi

GSS College, Belagavi  
Co-ordinator

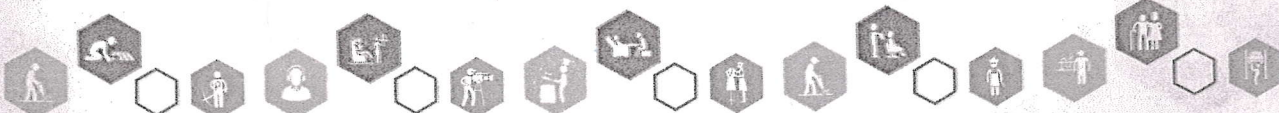


*Certificate course Green house operator*  
**Table of content** *Syllabus Botany 1,2,2 and 1,2,3*

S.No.	Modules and Units	Page No
1.	<b>Introduction</b>	1
	Unit 1.1 - Basic concept of Protected Cultivation	3
	Unit 1.2 - Different types of Greenhouse Structures	23
	Unit 1.3 - Roles and responsibilities of a Greenhouse Operator	35
2.	<b>Operate and maintain various green house components (AGR/N1007)</b>	39
	Unit 2.1 – Green house components and its operations	41
	Unit 2.2 – Maintenance of green house components	63
3.	<b>Manage green house operations (AGR/N1008)</b>	67
	Unit 3.1 – Green House operations	69
	Unit 3.2 – Monitoring and documentation of Green House Operations	95
4.	<b>Maintain Health &amp; Safety at the work place (AGR/N9903)</b>	105
	Unit 4.1 - Maintain clean and efficient work place	107
	Unit 4.2 - Render appropriate emergency procedures at the work place	112
6.	<b>Employability &amp; Entrepreneurship Skills (AGR/N4103)</b>	115
	Unit 5.1 – Personal Strengths & Value Systems	119
	Unit 5.2 – Digital Literacy: A Recap	138
	Unit 5.3 – Money Matters	144
	Unit 5.4 – Preparing for Employment & Self Employment	155
	Unit 5.5 – Understanding Entrepreneurship	164
	Unit 5.6 – Preparing to be an Entrepreneur	186

*[Signature]*  
**IQAC Co-ordinator**  
**GSS College, Belagavi**

*[Signature]*  
**Head**  
**Dept. of Botany**  
**GSS College, Belagavi.**





# Govindram Seksaria Science

## ATTENDANCE

Class : B.Sc. I.

Subject : Green house certificate course

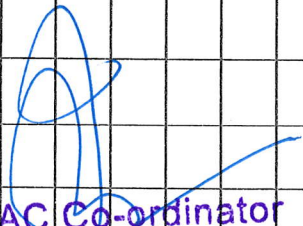
Roll No.	Date of Lecture Name of Student																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
119	V. Upasi	0	0	0	1	0	0	0	0	1	1							
418	Rutuja Halgekar	0	0	1	2	3	4	5	6	7	8	9						
451	Revati Halgekar	0	1	2	3	3	4	5	5	5	5							
502	Nikita Patil	0	1	2	3	3	4	5	5	6	6	6						
503		0	1	2	3	3	3	3	3	3	3	4						
601		0	1	2	3	4	4	5	5	6	6	6						
602		0	0	1	2	2	2	2	2	2	2	2						
604		1	2	3	4	4	4	5	5	6	6	7						
605		1	2	3	4	4	4	5	5	6	5	5						
607		0	1	2	3	4	4	5	5	5	5	5						
608		0	0	1	2	2	2	2	2	2	2	2						
609		1	2	3	4	4	5	6	7	8	8	8						
611		1	2	3	4	4	4	4	4	4	4	4						
612		1	2	3	4	4	4	5	6	6	6	6						
613		1	2	3	4	4	4	5	6	7	7	7						
614		1	2	3	4	5	6	7	8	9	10	11						
616		1	2	3	4	5	6	7	7	7	7	7						
618		1	2	3	4	4	4	4	4	4	4	4						
620		0	0	1	2	2	2	2	2	3	3	3						
622		0	1	2	3	3	4	5	5	6	6	7						
623		0	0	1	2	2	2	3	4	5	5	5						
624		0	0	1	2	2	2	2	2	2	2	2						
626		0	1	2	3	3	3	3	3	3	3	4						
630		0	0	0	0	0	1	2	3	4	4	5						
<del>631</del>																		
651	<b>IQAC Co-ordinator</b>	0	0	1	2	3	3	3	4	5	5	5						
854	<b>GSS College, Belagavi</b>	0	1	2	3	3	3	4	4	5	5	5						

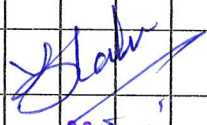


Class : B.Sc.I

Subject : Green house certificate course

Roll No.	Date of Lecture Name of Student																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
851		0	0	1	2	2	3	3	3	3	3							
852		0	1	2	3	3	3	3	3	3	3							
853		0	1	2	3	3	3	3	3	3	3							
854		0	1	2	3	3	3	4	4	5	5							
855		0	0	1	2	2	2	2	2	2	2							

  
**IQAC Co-ordinator**  
 GSS College, Belagavi

  
**Head**  
**Dept. of Botany**  
 GSS College, Belagavi