

**Rayat Shikshan Sanstha's**  
**Rajarshi Chhatrapati Shahu College**  
**Kolhapur**

**Department of Botany**

**CAREER ORIENTED COURSE**

**BIODIVERSITY CONSERVATION**

**2020-2021**



## **Career Oriented Course- Certificates Course in Biodiversity and it's Conservation.**

**1.Name of the Department:** - Department of Botany

**2.Course Name:** - **Certificates Course in Biodiversity and it's Conservation.**

**3.Course Coordinator Name & Contact Number:** - Mr.Gojare S M,  
9890593483

**4.Duration:** -6 Months

**5.Course Fee:** - Rs- 300/-

**6.Eligibility:** - 12" passed students are eligible to take admission

**7.Minimum intake Capacity:** - 20

**8.Objective :**

The objective of this scheme is to introduce career and market skill enhancing add-on courses that have utility for job, self employment and empowerment of the students

**9.Certificate Course:**

The course will be of 30 credits. Each credit will have 15 hrs. of workloads out of which 10 credits should necessarily be assigned to fieldwork/project work/training (450)

**10.Teaching programme:**

Theory and Practicals is of -300 hrs — 20 credits.

Field Work /Project work /Training-150 hrs — 10 credits.

Theory Paper I — 100 marks

Theory Paper II — 100marks

Paper III 100marks

(practical —projects- work experience )

*Gojare*

Co-ordinator  
COc in Biodiversity Conservation



*Gojare*

Head  
Department of Botany  
Rajarshi Chh. Shahu College, Kolhapur.

RAYAT SHIKSHAN SANSTA'S  
RAJARSHI CHHATRAPATI SHAHU COLLEGE KOLHAPUR

Department of Botany

Carrier Oriented Course: - Biodiversity Conservation

2020-2021

Notice

02/01/2020

All the students of Arts, Science and Commerce are hereby informed that Department of Botany is going to start Carrier Oriented Course Certificate course in Biodiversity Conservation from next week. Those who are interested please contact to Head Department of Botany. Course will be taken online mode.

The Course fees is Rs.300/- and duration of Course is 6 Months.

*S. K. Gore*  
**Head**  
Department of Botany  
Rajarshi Chh. Shahu College, Kolhapur.



*S. K. Gore*  
**Principal,**  
Rajarshi Chh. Shahu College  
Kolhapur.

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RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR

Career Oriented Course 2020-21

**BIODIVERSITY CONSERVATION**

**List of Students Enrolled**

Sr. No.	Roll Number	Name of the students	Class	Signature
1.	59	Suryawanshi Supriya Tukaram	B.Sc. III	<i>Supriya</i>
2.	60	Yesare Aniruddha Baban	B.Sc. III	<i>Abyasare</i>
3.	61	Kamble Pranam Kerba	B.Sc. III	<i>Pranam Kamble</i>
4.	62	Shivputra Kempayya Hanchinwar	B.Sc. III	<i>Shivputra</i>
5.	63	Kamble Krishna Laxman	B.Sc. III	<i>Krishna</i>
6.	64	Thakur Kalal Bajrang	B.Sc. III	<i>K. Thakur</i>

*Signe*  
Co-ordinator  
COC in Biodiversity Conservation



*Signe*  
Head  
Department of Botany  
Rajarshi Chh. Shahu College, Kolhapur

## 11.Syllabus

### Paper I — Fundamentals of biodiversity.

#### Section I

Unit I—Origin of life.	15
—Position of different organisms in living world.	
— Differentiation between prokaryotic and eukaryotic cell.	
1.3— Brief introduction to five kingdom classification system.	
Unit 2 —Concept of Evolution	12
— Theories of evolution, Darwinism, Concept of species formation.	
— Phylogeny	
Unit 3—Taxonomy and Classification	20
3.1- Introduction to major groups of plants.	
3.2- Introduction to major groups of animals and microbes.	
Unit 4 —Loss of Biodiversity	10
4.1- Causes of loss of Biodiversity.	
4.2- Effects of loss of Biodiversity.	
4.3 -Terminology- Red data book-concept.	

#### Section II

Unit I—Biodiversity introduction, concept and significance	7
Unit 2 —Levels of Biodiversity	15
2.1— Mega diversity in India	
<b>2.2 -Bioreserves</b>	
2.3 Hot spots in India with special reference to Himalaya and Western ghat(Maharashtra)	
2.4 –National parks,wildlife sanctuaries Botanical gardens and Zoological museums.	



<b>Unit3-Climatic Change</b>	<b>7</b>
<b>3.1-Causes of Climatic change.</b>	
<b>3.2-Effects of Climatic change.</b>	
<b>Unit4-Earth Summits- Objectives and resolution passed.</b>	<b>12</b>

**Paper II-Ecology and Conservation Biology.**

**Section-I**

<b>Unit1-Ecology concept,biotic and abiotic component</b>	<b>12</b>
<b>Unit2-Ecosystem and Phytogeography of India</b>	<b>12</b>
<b>Introduction, components of Ecosystem.</b>	
<b>Food chains and Food webs</b>	
<b>Unit3</b>	<b>12</b>
<b>Environmental Pollution.</b>	
<b>Causes and effects of it on environment</b>	
<b>Unit4</b>	<b>10</b>
<b>Plant as Bioindicatos</b>	
<b>Role in environmental monitoring</b>	

**SectionII**

<b>Unit1-Biodiversity conservation strategies.</b>	<b>15</b>
Insitu and Exsitu conservation	
<b>Unit2-Research institute related to Conservation of Biodiversity</b>	<b>15</b>
Bio-ethics,IPR and Patenting	
<b>Unit3-Ecotourism and Biodiversity.</b>	<b>12</b>
Communication, education and public awareness	
<b>Unit4-Brief review of protocols given by various earth summits to various nations.</b>	<b>12</b>



### Paper-III

#### **Practicals:-**

**30Periods**

- Cultivation and isolation of micro-organisms.
- Morphology of major groups (Bryophyte, Pteridophyta, Gymnosperms and Angiosperms)
- Study of comparative diversity in Angiosperms.
- Classification of insects (All major orders) using Lee Study of wild species in crop improvement.
- Study of Red data book Species of Sahyadri belonging to Satara district.

#### **Work experience:**

**60periods**

- Assessment of Biodiversity of an area (Ajinkyatara, Yavateswar, Kas, Pateswar) by suitable sampling method (quadrate) species abundance, frequency, density



## **12.Suggested Reading for Biodiversity:**

- 1.Veena Arora 202 Natraj Publishers ,Dehradun Publisher: The Biological
- 2.Diversity Act,Edt Heywood, V.H .: Global Biodiversity Assessment PartI
- 3.M.S.Prashanth: Environmental Studies
- 4.M.C.Dash:Fundamental of Ecology
- 5.D.K.Asthana,Meera Asthana:Environment: Problems&Solutions
- 6.D.K.Belsare: Introduction to Biodiversity
- 7.SurendraSingh:Geo morphology and Remote Sensing in Environmental Management
- 8.N.Das Gupta:Environmental Accounting
- 9.E rach Bharucha:Textbook of Environmental Studies
- 10.M.L.Narasaiah:Biodiversity & Sustainable Development
- 11.M.L.Narasaiah:Education & Biodiversity
- 12.R.L.Panigrahy,LingarajPatro:Biodiversity Conservation and Sustainable Development
- 13.John R.Jensen:Remote Sensing of the Enviroment
- 14.M.M.Anji Reddy.: Remote Sensing and Geographic allInformation
- 15.Systema Veer Bala Rastogi:Fundamentals of Biostatistics
- 16.P.K.Banejee:Introduction to Biostatistics
- 17.Jadhav,H.and Bhosale, V.M. Environmental Protection and Laws
- 18.Principles of Biochemistry:Lehninger

*Saur*

**Co-ordinator**  
COc in Biodiversity Conservation



*Saur*

**Head**  
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Department of Botany

Career Oriented Course 2020-21

BIODIVERSITY CONSERVATION

ATTENDENCE

Sr. No.	Name of Teacher	Online lecture links
1	Mr. Gojare Santosh M.	<a href="https://forms.gle/ZSbjgpmEQ1hx4QtW6">https://forms.gle/ZSbjgpmEQ1hx4QtW6</a>
2	Dr. Rode Surekha P.	<a href="https://forms.gle/on3k3Cf47w1jVzkLA">https://forms.gle/on3k3Cf47w1jVzkLA</a>
3	Mr. Gojare Santosh M.	<a href="https://forms.gle/wchPe8Cv8LzyK9zi8">https://forms.gle/wchPe8Cv8LzyK9zi8</a>
4	Mr. Gojare Santosh M.	<a href="https://forms.gle/s3Qu5kHGDcXP3DyZ6">https://forms.gle/s3Qu5kHGDcXP3DyZ6</a>
5	Dr. Rode Surekha P.	<a href="https://forms.gle/wTumrNnMfSURFTNq8">https://forms.gle/wTumrNnMfSURFTNq8</a>
6	Mr. Gojare Santosh M.	<a href="https://forms.gle/YdqZ8v71u5JBDzEW6">https://forms.gle/YdqZ8v71u5JBDzEW6</a>
7	Dr. Rode Surekha P.	<a href="https://forms.gle/z5RZ3ksUZLsF8RaC7">https://forms.gle/z5RZ3ksUZLsF8RaC7</a>
8	Mr. Gojare Santosh M.	<a href="https://forms.gle/zzXt17Pigai7Y9o97">https://forms.gle/zzXt17Pigai7Y9o97</a>
9	Dr. Rode Surekha P.	<a href="https://forms.gle/Aaf39TfRVStM8NX69">https://forms.gle/Aaf39TfRVStM8NX69</a>
10	Dr. Rode Surekha P.	<a href="https://forms.gle/wp6DkYw9xphiC3jQ8">https://forms.gle/wp6DkYw9xphiC3jQ8</a>
11	Mr. Gojare Santosh M.	<a href="https://forms.gle/1vByTX5pZDnA8jA86">https://forms.gle/1vByTX5pZDnA8jA86</a>
12	Dr. Rode Surekha P.	<a href="https://forms.gle/SpHHG5MkoAW2m8Y59">https://forms.gle/SpHHG5MkoAW2m8Y59</a>
13	Dr. Rode Surekha P.	<a href="https://forms.gle/LwpBXgYMaANZbFPVA">https://forms.gle/LwpBXgYMaANZbFPVA</a>
14	Dr. Rode Surekha P.	<a href="https://forms.gle/8HRdPbYcJ1wUDxzm9">https://forms.gle/8HRdPbYcJ1wUDxzm9</a>
15	Mr. Gojare Santosh M.	<a href="https://forms.gle/NrT2gwXUs1AKBMUU8">https://forms.gle/NrT2gwXUs1AKBMUU8</a>
16	Mr. Gojare Santosh M.	<a href="https://forms.gle/wp6DkYw9xphiC3jQ8">https://forms.gle/wp6DkYw9xphiC3jQ8</a>
17	Dr. Rode Surekha P.	<a href="https://forms.gle/SpHHG5MkoAW2m8Y59">https://forms.gle/SpHHG5MkoAW2m8Y59</a>



*Gojare*  
Head  
Department of Botany  
Rajarsi Chh. Shahu College, Kolhapur.

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**Rajarshi Chhatrapati Shahu College, Kolhapur**

**Department of Botany**

**CAREER ORIENTED COURSE: BIODIVERSITY CONSERVATION**

**2020-21**

**Question Paper Pattern,**

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**PAPER- I**

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Time: 3 hours

Marks: 100

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**Que 1: Rewrite the following sentences by choosing alternative.**

**20 Marks**

1

To

10

**Que 2: Attempt any three of the following.**

**60 Marks**

A

B

C

D

E

**Que 3: Attempt any four of the following.**

**20 Marks**

A

B

C

D

E



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**2020-21**

**Question Paper Pattern,**

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**PAPER- II**

Time: 3 hours

Marks: 100

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**Que 1: Rewrite the following sentences by choosing alternative.**

**20 Marks**

1

To

10

**Que 2: Attempt any three of the following.**

**60 Marks**

A

B

C

D

E

**Que 3: Attempt any four of the following.**

**20 Marks**

A

B

C

D

E



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**Question Paper Pattern,**

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**PRACTICAL EXAMINATION**

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Time: More than 4 hours

Marks: 100

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**Que 1: Identify and show important structures observed in given specimen. 20 Marks**

- A
- B
- C
- D
- E

**Que 2: Identify and show important structures observed in given specimen. 20 Marks**

- A
- B

**Que 3: Identify and show important structures of 20Marks**

- A
- B

**Que 4: Demonstrate the technique 20 Marks**

- A
- B


**Que5: Demonstrate the technique 20 Marks**

- A
- B

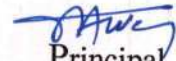


Rayat Shikshan Sanstha's  
**Rajarshi Chhatrapati Shahu College Kolhapur**  
Carrier Oriented Course Examination 2020-2021  
Name of Exam - COC-Certificate Course in Biodiversity Conservation  
**Results**

Sr. No	Name of Students (Mother' Name)	Paper I (100 M)	Paper II (100 M)	Practical (100 M)	Total (300)	Percentage (%)	Class
1	Suryawanshi Supriya Tukaram (Suvarna)	65	67	90	222	74	I <sup>st</sup>
2	Yesare Aniruddha Baban (Alka)	80	75	92	247	82	I <sup>st</sup>
3	Kamble Pranam Kerba (Surekha)	60	65	90	215	71	I <sup>st</sup>
4	Shivputra Kempayya Hanchinwar (Shobha)	60	68	89	217	72	I <sup>st</sup>
5	Kamble Krishna Laxman (Kamal)	70	69	89	228	76	I <sup>st</sup>
6	Thakur Kajal Bajrang (Sudha)	78	67	87	232	77	I <sup>st</sup>

  
Co ordinator  
Dr. S.P.Rode  
Co-ordinator  
COC in Biodiversity Conservation



  
Principal  
Principal,  
Rajarshi Chh. Shahu College  
Kolhapur.

"Education through self-help is our motto" -Karmaveer



Rayat Shikshan Sanstha's,

# RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR.



NAAC Reaccredited 'A' Grade (with CGPA 3.07) 3rd Cycle

## CERTIFICATE

This is to certify that, Shri/Smt. Shivputra Kempaya Hanchiware  
Mother's Name Shobha  
Class B.Sc.III of Rajarsi Chhatrapati Shahu College Kolhapur.  
has successfully completed the Career Oriented/Certificate Course in Biodiversity Conservation  
organized by **Rajarsi Chhatrapati Shahu College, Kolhapur.**  
Course organized academic year 2020 - 2021

**Course Coordinator**



**Principal**