

**GOVT. HOLKAR (MODEL AUTONOMOUS)  
SCIENCE COLLEGE, INDORE**



(An ISO 9001:2015 & ISO 14001:2015 Certified Institution)



# SSR DOCUMENT

2017-18 TO 2021-22

## CRITERION – 5

### Student Support and Progression

**Metric No. : 5.1.2**

**Document Title:**

**Capacitance building training programmes /  
internships/ Certificate Courses**

1.

# Organic Farming

## 1.1 Brochure: -

<b>Govt. Holkar (Model Autonomous) Science College, Indore</b>		
	<b>ORGANIC FARMING Value Added Course ( Deptt of Botany)</b>	
<b>Value Added Course on Organic Farming" conducted by The Department of Botany from 12/4/22 to 29/4/22.</b>		
	Don't miss this opportunity to learn about organic farming techniques and practices. Register today for the "Value Added Course on Organic Farming" conducted by the Department of Botany.	<b>"WE ARE READY TO RE- GREEN FOR THE FUTURE OF OUR EARTH"</b>

### Key Benefits of the Course

:

- Learn about organic farming techniques and practices.
- Gain practical knowledge on how to grow crops organically.
- Understand the importance of organic farming for the environment and health.
- Explore the economic benefits of organic farming.
- Receive a certification from a reputable institution upon successful completion of the course.

### Objectives of the Course

The objective of this course is to provide participants with knowledge and skills in organic farming. The course will cover topics such as organic farming techniques, soil management, pest management, and crop rotation. Participants will also gain practical experience through hands-on training sessions.

### Career Opportunities:

Upon completion of this course, participants will be equipped to pursue a variety of careers in organic farming, including:

- Organic farmer
- Farm manager
- Soil scientist
- Agricultural consultant





## **1.2 Permission: -**

वनस्पतिशास्त्र विभाग, शा0 होलकर विज्ञान महाविद्यालय, इन्दौर, (म0प्र0)

क्रमांक 355B/वनस्पतिशास्त्र/2022

दिनांक: 06/04/2022

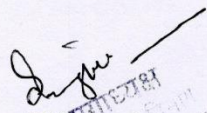
प्रति,

प्राचार्य महोदय,  
शास0 होलकर विज्ञान महा0,  
इन्दौर, (म0प्र0)

विषय :- 60 Hours Value added Course कराने की अनुमति विषयक।

महोदय,

उपरोक्त विषयान्तर्गत अनुरोध है, कि महाविद्यालय के वनस्पतिशास्त्र विभाग द्वारा विद्यार्थियों हेतु 60 Hours का Value added Course "Organic Farming" दिनांक 12/04/2022 से 29/04/2022 तक विभाग में आयोजित किया जाना प्रस्तावित हैं।

  
डॉ. सन्दीप इकबाल  
विभागाध्यक्ष  
वनस्पतिशास्त्र विभाग

वनस्पतिशास्त्र विभाग  
शा. होलकर विज्ञान महा. इन्दौर



### **1.3 Notice: -**

**Govt. Holkar (Model Autonomous) Science College, Indore**  
**Department of Botany**  
**Value Added Course**  
**60 Hours Training Program**  
**On**  
**“Organic Farming”**

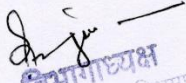
Value added courses are the types of courses which help a particular individual to develop their skills in their chosen field of the study. The Value-Added Courses aim to provide additional learner centric graded skill oriented technical training, with the primary objective of improving the employability skills of students. It is important for all institutions to supplement the curriculum to make students better prepared to meet industry demands as well as develop their own interests and aptitudes. Organic farming and Vermi-composting may be defined as the sum of the activities performed for Eco- friendly farming and to minimize the uses of pesticide and chemical.

**Eligibility:** As per course requirement: 10+2/Graduation

**Prerequisites:** As per course requirement: Basic knowledge of farming and medicinal plants.

**Course Fee:** 500/-

**Course Duration information:** 60 hrs

  
**विभागाध्यक्ष**  
वनस्पति शास्त्र विभाग  
शा. होलकर विज्ञान प्रिडा, इन्दौर

## **1.4 Syllabus: -**

**Govt. Holkar (Model Autonomous) Science College, Indore**  
**Department of Botany**  
**Value Added Course**  
**On**  
**Organic Farming**  
**Syllabus**

**Course Outcome:** Standardized Organic Farming and Vermi-composting, Generation of knowledge towards cultivation practices will reduce the dependence on pesticides and chemicals, thereby conserving the soil fertility. Knowledge regarding medicinal property and uses of eco-friendly tech. that conserve soil fertility and human health in our daily life. Student of Botany can start own business and become entrepreneur.

**Module 1 (12 hours):** Introduction and Importance of Organic Farming: -

- Overview of Organic Farming
- Importance of Organic Farming
- Benefits of Organic Farming over Conventional Farming
- Comparison of Organic and Conventional Farming
- Principles of Organic Farming
- Standards and Certification in Organic Farming
- Market Potential and Demand for Organic Products

**Module 2 (12 hours):** Various Methods of Organic Farming in India: -

- Organic Farming Methods - Crop Rotation, Green Manure, Companion Planting, Mulching, Intercropping, Biological Pest Control, etc.
- Advantages and Disadvantages of Different Organic Farming Methods
- Application of Organic Farming Methods in India
- Organic Farming Case Studies

**Module 3 (12 hours):** Introduction and Importance of Vermi-composting: -

- Overview of Vermi-composting
- Importance of Vermi-composting
- Advantages of Vermi-composting over Conventional Composting
- Comparison of Vermi-composting and Conventional Composting
- Vermi-composting Process
- Types of Worms Used in Vermi-composting

**Module 4 (12 hours):** Economics of Vermi-composting and Organic Farming: -

- Cost-Benefit Analysis of Organic Farming
- Market Potential for Organic Products



- Pricing and Marketing Strategies for Organic Products
- Profitability Analysis of Vermi-composting
- Sources of Funding for Organic Farming and Vermi-composting

**Module 5 (12 hours): Hands-on Training and Practical Implementation: -**

- Setting up an Organic Farm
- Planning and Execution of Vermi-composting
- Soil Management Techniques
- Crop Management Techniques
- Harvesting and Post-Harvest Techniques
- Quality Control Measures
- Hands-on Training in Organic Farming Techniques and Vermi-composting

*Approved by* K. Shivani  
 Coordinator, Board of Studies  
 Govt. Holkar (Model Autonomous)  
 Science College, Indore

[Signature]  
 Chairperson, Board of Studies  
 Govt. Holkar (Model Autonomous)  
 Science College, Indore

**Approved**

[Signature]  
 Member Secretary, Academic Council  
 Govt. Holkar (Model Autonomous)  
 Science College, Indore



## 1.5 Students List: -

Govt. Holkar (Model, Autonomous) Science College, Indore (M.P.)

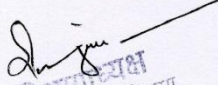
### Value added Course

(Duration- 12 - 29 Apr. 2022)

### Student List

### "Organic Farming"

S.No.	Name Of Student	Mark Obtained (M.M. -50)
1	Nandani Shirwat	35
2	Rahul Meghwal	36
3	Sonam Raghav	35
4	Yogesh Kumar Kori	37
5	Yognandini Chouhan	38
6	Manisha Khede	40
7	Shivani Parihar	36
8	Devrishi Salvi	37
9	Shalini Panwar	38
10	Guljar Shah	35
11	Aadil Khan	36
12	Krishna Kant Baiswar	35
13	Mahima Karole	38
14	Shoaib Pathan	40
15	Anshika Mourya	41
16	Gayatri Sahu	39
17	Prafull Soni	35
18	Anita Bhabar	37
19	Sonu Maida	38
20	Dinesh Solanki	40
21	Kiran Patidar	36
22	Neha Parmar	38
23	Saloni Chokle	39
24	Nandani Shirwat	35

  
विभागाध्यक्ष  
वनस्पति शास्त्र विभाग  
शा. होलकर विज्ञान महा. इन्दौर




2.

# Mushroom Cultivation



## 2.1 Brochure: -

**Govt. Holkar (Model Autonomous) Science College, Indore**  
Department of Botany



**Topic**  
**Mushroom Cultivation & Its Marketing**  
**Value Added Course on "Mushroom Cultivation & Its Marketing"**  
**Conducted by Department of Botany from 09/04/2022 to 29/04/2022**

### **Brief Syllabus:**

The course will cover the following topics:

- Introduction to mushroom cultivation and its benefits
- Mushroom varieties and their nutritional and medicinal properties
- Mushroom spawn production
- Substrate preparation for mushroom cultivation
- Methods of cultivation of edible and medicinal mushrooms
- Harvesting, processing, and packaging of mushrooms
- Marketing and promotion of mushroom products
- Value addition to mushroom products

### **Key Benefits:**

- Participants will gain practical knowledge about mushroom cultivation techniques and marketing strategies.
- They will learn about the nutritional and medicinal benefits of mushrooms and their role in sustainable agriculture.
- They will get hands-on experience in mushroom cultivation.
- Participants will develop skills in packaging, labelling, and marketing of mushrooms.
- They will receive a certificate of participation from the Govt Holkar (Model Autonomous) Science College, Indore.

### **Career Opportunities:**

- Mushroom Cultivation Entrepreneur
- Mushroom Marketing Manager
- Mushroom Farm Manager
- Mushroom Product Development Manager
- Researcher in Mushroom Cultivation

### **Objective:**

The course is designed to provide participants with a comprehensive understanding of mushroom cultivation and marketing. The objective of this course is to equip participants with practical skills and knowledge to start their own mushroom cultivation business and develop marketing strategies for it.





## **2.2 Permission: -**

वनस्पतिशास्त्र विभाग, शा0 होलकर विज्ञान महाविद्यालय, इन्दौर,(म0प्र0)

क्रमांक 355A/वनस्पतिशास्त्र/2022

दिनांक: 06/04/2022

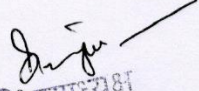
प्रति,

प्राचार्य महोदय,  
शास0 होलकर विज्ञान महा0,  
इन्दौर,(म0प्र0)

विषय :- **60 Hours Value added Course** कराने की अनुमति विषयक।

महोदय,

उपरोक्त विषयान्तर्गत अनुरोध है, कि महाविद्यालय के वनस्पतिशास्त्र विभाग द्वारा विद्यार्थियों हेतु **60 Hours का Value added Course “Mushroom Cultivation and its Marketing”** दिनांक 09/04/2022 से 29/04/2022 तक विभाग में आयोजित किया जाना प्रस्तावित है।

  
डॉ. राजेंद्रा इकबाल  
विभागाध्यक्ष  
वनस्पतिशास्त्र विभाग  
शा: होलकर विज्ञान महा. इन्दौर

## **2.3 Notice: -**

**Govt. Holkar (Model Autonomous) Science College, Indore**  
**Department of Botany**  
**Value Added Course**  
**60 Hours Training Program**  
**On**

**“Mushroom Cultivation and its Marketing”**

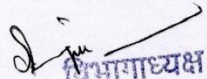
Value added courses are the types of courses which help a particular individual to develop their skills in their chosen field of the study. The Value-Added Courses aim to provide additional learner centric graded skill oriented technical training, with the primary objective of improving the employability skills of students. It is important for all institutions to supplement the curriculum to make students better prepared to meet industry demands as well as develop their own interests and aptitudes. Mushroom Cultivation and its Business may be defined as the sum of the activities performed for the successful production of Edible Mushrooms and marketing of Mushrooms in various hospitality industry and medicinal uses, etc.

**Eligibility:** As per course requirement: 10+2/Graduation

**Prerequisites:** As per course requirement: Basic knowledge of farming and medicinal plants.

**Course Fee:** 500/-

**Course Duration information:** 60 hrs

  
विभागाध्यक्ष  
वनस्पति शास्त्र विभाग  
शा. होलकर विज्ञान महा. इन्दौर



## **2.4 Syllabus: -**

**Govt. Holkar (Model Autonomous) Science College, Indore**  
**Department of Botany**  
**Value Added Course on Mushroom Cultivation and its**  
**Marketing**  
**Syllabus**

**Course Outcome:** Standardized Mushroom cultivation practices and its business, will reduce the dependence on collection of raw material from wild to meet the market demand, thereby conserving the biodiversity. Knowledge regarding medicinal property and uses of medicinal mushrooms in our daily life. Student of Botany can start own business and become entrepreneur.

**Module 1 (12 hours):** Introduction and Importance of Mushroom Cultivation:

- Introduction to Mushroom Cultivation
- History and Evolution of Mushroom Cultivation
- Nutritional and Medicinal Value of Mushrooms
- Importance of Mushroom Cultivation
- Global and Indian Market for Mushrooms
- Challenges and Opportunities in Mushroom Cultivation

**Module 2 (12 hours):** Varieties of Cultivated Mushroom in India:

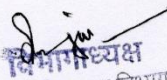
- Introduction to Different Mushroom Varieties
- Oyster Mushrooms
- Button Mushrooms
- Shiitake Mushrooms
- Reishi Mushrooms
- Other Popular Mushroom Varieties in India
- Characteristics and Requirements of Different Mushroom Varieties

**Module 3 (12 hours):** Methods of Mushroom Cultivation:

- Basic Concepts of Mushroom Cultivation
- Spawn Production
- Substrate Preparation
- Sterilization Techniques
- Inoculation Techniques
- Casing and Spawning
- Environmental Management
- Harvesting and Post-Harvest Management

**Module 4 (12 hours):** Business and Economics of Mushroom Cultivation:

- Market Analysis and Demand Estimation
- Cost-Benefit Analysis of Mushroom Cultivation
- Pricing Strategies and Marketing Techniques
- Business Plan Development
- Government Schemes and Subsidies for Mushroom Cultivation

  
**विभागाध्यक्ष**  
वनस्पति शास्त्र विभाग  
शा. होलकर विज्ञान महा. इन्दौर



- Risk Assessment and Management
- Integration of Mushroom Cultivation with Other Farming Systems

**Module 5 (12 hours):** Hands-on Training and Practical Demonstration:

- Site Selection and Preparation
- Spawn Production
- Substrate Preparation
- Sterilization Techniques
- Inoculation Techniques
- Environmental Management
- Casing and Spawning
- Harvesting and Post-Harvest Management
- Quality Control and Assurance
- Value-Added Product Development
- Demonstration of Mushroom Cultivation Techniques

*Dubey*  
 Coordinator, Board of Studies  
 Govt. Holkar (Model Autonomous)  
 Science College, Indore

*[Signature]*  
 Chairperson, Board of Studies  
 Govt. Holkar (Model Autonomous)  
 Science College, Indore

**Approved**

*[Signature]*  
 Member Secretary, Academic Council  
 Govt. Holkar (Model Autonomous)  
 Science College, Indore

Member Secretary, Academic Council  
 Govt. Holkar (Model Autonomous)  
 Science College, Indore

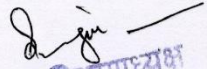
## 2.5 Students List: -

**Govt. Holkar (Model, Autonomous) Science College, Indore  
(M.P.)**

**Value added Course**  
(Duration- 09 - 29 Apr. 2022)

**"Mushroom Cultivation and its Marketing"**

S.No.	Name Of Student	Mark Obtained (M.M. -50)
1	Pallavi Patel	38
2	Ritika Pandya	37
3	Jitendra Verma	36
4	Shikha Upadhyay	34
5	Shivangi Gautam	39
6	Aditya Shukla	40
7	Roshni Chuouhan	37
8	Kunjata Meena	38
9	Kalita Dudve	35
10	Tanisha Majhi	34
11	Urmila Mandloi	37
12	Swati More	35
13	Pooja Sengar	34
14	Bhupendra Sohani	40
15	Aditi Yadav	36
16	Yashi Shrivastava	38
17	Lakshmi Mehta	37
18	Nancy Pawar	38
19	Saloni Chokle	37
20	Murli Manohar Shukla	37
21	Rupesh Kumar Patel	35
22	Neha Parmar	36
23	Priya Mukati	40
24	Roshmi Chouhan	33




  
विभागाध्यक्ष  
वनस्पति शास्त्र विभाग  
शा. होलकर विज्ञान महा. इन्दौर

3.

# Application of Tools & Techniques in Biology



### **3.1 Brochure: -**

	<p><b>GOVT. HOLKAR (MODEL, AUTONOMOUS) SCIENCE COLLEGE, INDORE (M.P.)</b> (Affiliated to Devi Ahilya Vishwavidhalaya, Indore)</p>	
	<p>30 HRS. VALUE ADDED COURSE ON <b><u>APPLICATION OF TOOLS AND TECHNIQUE IN BIOLOGY</u></b> ORGANIZED BY ZOOLOGY &amp; FISHERIES DEPARTMENT</p>	
<p>Patron Dr. Suresh T. Silawat Additional Director, Higher education Indore division &amp; Principal Gov. Holkar Science College, Indore.</p>	<p>Date :- 04 May to 14 May 2022 Platform :- Google meet App Time :- 11:00 to 2:00 PM</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Attendance will be taken daily.</li><li><input type="checkbox"/> Quiz will be given daily which is compulsory.</li><li><input type="checkbox"/> Feedback will be taken after the completion of course.</li></ul> <p>Head :- Dr. Rekha Sharma Convenor:- Dr. Preeti Khullar Co-Convenor:- Dr. Ravindra Pal Ahirwal Organising Team:- Mrs. Shanti Patidar and Dr. Priya Gaur</p>	

### **3.2 Syllabus: -**

Govt. Holkar Science College Indore (M.P.)  
**SYLLABUS**  
**Department of Zoology & Fisheries**  
30 Hrs Value Added Course on  
**"Application of Tools and Techniques in Biology"**

Date	Modules	Name of Instrument
04-05-2022	Module : 1	Microtome
		Autoclave
05-05-2022		Centrifuge and their types
06-05-2022		Laminar Air Flow
07-05-2022	Module: 2	Colorimeter and Spectrophotometer
09-05-2022		Electrophoresis
10-05-2022		Fluorescent Microscope and Phase contrast Microscope Haemocytometer
11-05-2022	Module: 3	Microscope
		Electron Microscope
12-05-2022		Microtome
13-05-2022	Module: 4	PCR
		pH meter
14-05-2022		Modern Fish Farming Technology Fishing Methods Valedictory – Dr. N. Dagaonkar

Approved

*Rsharny*  
Coordinator, Board of Studies  
Govt. Holkar (Model Autonomous)  
Science College, Indore

*Bh'w'*  
Member Secretary, Academic Council  
Govt. Holkar (Model Autonomous)  
Science College, Indore



### **3.3 resource Persons: -**

Govt. Holkar Science College Indore (M.P.)

**Department of Zoology & Fisheries**

30 Hrs Value Added Course on

**“Application of Tools and Techniques in Biology”**

**C V of speakers of 30 hours Value Added Course on “Application of Tools and Techniques in Biology” from 4 May to 14 May 2022**

<b>Name</b>	Dr. Anis Siddhiqui
<b>Qualification</b>	Ph.D. Zoology
<b>Delivered Topic</b>	Microtome
<b>Current Position</b>	Retd. Professor, Govt. Girls P.G. College Indore (M.P.)
<b>Designation</b>	Retd. Professor
<b>Teaching Experience</b>	43
<b>Research guide status</b>	Yes
<b>Published Research Paper</b>	32
<b>Expertise</b>	Fish and Fisheries

<b>Name</b>	<b>Dr. Priya Gaur</b>
<b>Qualification</b>	Ph.D. Zoology
<b>Current Position</b>	Department of Zoology, Govt. Holkar Science College Indore (M.P.)
<b>Delivered Topic</b>	Autoclave
<b>Designation</b>	Guest Faculty
<b>Teaching Experience</b>	3
<b>Research guide status</b>	No
<b>Published Research Paper</b>	13
<b>Expertise</b>	Ecology, Ornithology and Development Biology

<b>Name</b>	<b>Dr. Alka Dubey</b>
<b>Qualification</b>	Ph.D. Zoology
<b>Current Position</b>	Department of Zoology, Govt. Holkar Science College Indore (M.P.)
<b>Delivered Topic</b>	Centrifuge and their types
<b>Designation</b>	Guest Faculty
<b>Teaching Experience</b>	20
<b>Research guide status</b>	No
<b>Published Research Paper</b>	5
<b>Expertise</b>	Limnology and cell biology

**Name** **Dr. Ruchi Shivle**  
**Qualification** Ph.D. Zoology  
**Current Position** Department of Zoology, Govt. Holkar Science College Indore (M.P.)  
**Delivered Topic** Laminar Air Flow  
**Designation** Guest Faculty  
**Teaching Experience** 16  
**Research guide status** No  
**Published Research Paper** 3  
**Expertise** Fisheries

**Name** **Mrs. Shanti Patidar**  
**Qualification** M.Phil. Biochemistry  
**Current Position** Department of Zoology, Govt. Holkar Science College Indore (M.P.)  
**Delivered Topic** Colorimeter and Spectrophotometer  
**Designation** Guest Faculty  
**Teaching Experience** 9  
**Research guide status** No  
**Published Research Paper** 3  
**Expertise** Biochemistry, Physiology and Cell biology

**Name** **Dr. Anjali Kumar**  
**Qualification** Ph.D. Zoology  
**Current Position** Department of Zoology, Govt. Holkar Science College Indore (M.P.)  
**Delivered Topic** Laboratory safety  
**Designation** Professor  
**Teaching Experience** 35  
**Research guide status** No  
**Published Research Paper** 0  
**Expertise** Taxonomy



<b>Name</b>	<b>Dr. Pramila S</b>
Qualification	Ph.D. Zoology Department of Zoology, Govt. Holkar Science College Indore (M.P.)
Current Position	
Delivered Topic	Electrophoresis
Designation	Guest Faculty
Teaching Experience	20
Research guide status	No
Published Research Paper	3
Expertise	Fisheries

<b>Name</b>	<b>Dr. Ram Prajapati</b>
Qualification	Ph.D. Zoology Department of Zoology, Govt. Holkar Science College Indore (M.P.)
Current Position	
Delivered Topic	Fluorescent Microscope and Phase contrast Microscope
Designation	Associate Professor
Teaching Experience	28
Research guide status	Yes
Published Research Paper	35
Expertise	Physiology

<b>Name</b>	<b>Dr. Ravindra Pal Ahirwal</b>
Qualification	Ph.D. Zoology Department of Zoology, Govt. Holkar Science College Indore (M.P.)
Current Position	
Delivered Topic	Haemocytometer
Designation	Assistant Professor
Teaching Experience	13
Research guide status	Yes
Published Research Paper	5
Expertise	Environmental Biology

(समाविष्ट/प्रमाणपत्र/प्रमाणिका)  
GOVERNMENT OF MADHYA PRADESH  
DEPARTMENT OF HIGHER EDUCATION



**Name** Dr. Amita Dagaonkar  
**Qualification** Ph.D. Zoology  
**Current Position** Department of Zoology, Govt. Holkar Science College Indore (M.P.)  
**Delivered Topic** Microscope  
**Designation** Professor  
**Teaching Experience** 37  
**Research guide status** No  
**Published Research Paper** 10  
**Expertise** Limnology

**Name** Dr. Vipul Keerti Sharma  
**Qualification** Ph.D. Zoology  
**Current Position** Department of Zoology, Govt. Holkar Science College Indore (M.P.)  
**Delivered Topic** Electron Microscope  
**Designation** Professor  
**Teaching Experience** 25  
**Research guide status** Yes  
**Published Research Paper** 60  
**Expertise** Environmental Biology

**Name** Dr. Preeti Khullar  
**Qualification** Ph.D. Zoology  
**Current Position** Department of Zoology, Govt. Holkar Science College Indore (M.P.)  
**Delivered Topic** Microtome  
**Designation** Professor  
**Teaching Experience** 36  
**Research guide status** No  
**Published Research Paper** 0  
**Expertise** Fish and Fisheries



<b>Name</b>	<b>Dr. Renu Jain</b>
Qualification	Ph.D. Zoology
Current Position	Department of Zoology, Govt. Holkar Science College Indore (M.P.)
Delivered Topic	Waterbath
Designation	Assistant Professor
Teaching Experience	36
Research guide status	Yes
Published Research Paper	5
Expertise	Fish and Fisheries

<b>Name</b>	<b>Dr. Kiran Billore</b>
Qualification	Ph.D. Zoology
Current Position	Department of Zoology, Govt. Holkar Science College Indore (M.P.)
Delivered Topic	PCR
Designation	Professor and Head Biotechnology
Teaching Experience	39
Research guide status	Yes
Published Research Paper	10
Expertise	Fish and Fisheries

<b>Name</b>	<b>Dr. Rekha Sharma</b>
Qualification	Ph.D. Zoology
Current Position	Department of Zoology, Govt. Holkar Science College Indore (M.P.)
Delivered Topic	pH meter
Designation	Chairman and Prof. Head of Zoology
Teaching Experience	38
Research guide status	Yes
Published Research Paper	33
Expertise	Limnology, Fish and Fisheries and

<b>Name</b>	<b>Mr. Rohit Mishra</b>
Qualification	M.Phil. Aquaculture
Delivered Topic	Modern Fish Farming Technology
Current Position	Entrepreneur (Co-Founder : Oceana Aquaculture Bhopal (M.P.)
Designation	Owner of Oceana Aquaculture
Teaching Experience	0
Research guide status	No
Published Research Paper	Nil
Expertise	Aquaculture

<b>Name</b>	<b>Mr. Rohit Verma</b>
Qualification	M.FSc. Fisheries
Current Position	Department of Zoology, Govt. Holkar Science College Indore (M.P.)
Delivered Topic	Fishing Methods
Designation	Guest Faculty
Teaching Experience	8
Research guide status	No
Published Research Paper	5
Expertise	Fisheries

<b>Name</b>	<b>Dr. N. Dagaonkar</b>
Qualification	Ph.D. Physics
Current Position	Department of Physics, Govt. Holkar Science College Indore (M.P.)
Delivered Topic	Microscopes
Designation	Professor
Teaching Experience	40
Research guide status	Yes
Published Research Paper	19+3
Expertise	X Ray Spectroscopy and Statistical Methods



### 3.4 Students List: -

Attendance Sheet of 30 Hrs Value Added Course 2022											
S.No.	Name	04-05-2022	05-05-2022	06-05-2022	07-05-2022	09-05-2022	10-05-2022	11-05-2022	12-05-2022	13-05-2022	14-05-2022
1	Aafceyat Khan	P	P	P	P	P	P	P	P	P	P
2	Aarti	P	P	P	P	P	P	P	P	P	
3	Aaysha	P	P	P	P	P	P	P	P	P	P
4	Aftab Ahamad Pathan	P	P	P	P	P	P	P	P	P	
5	Ajay Tomar	P	P	P	P	P	P	P	P	P	
6	Alefiya kiranawala	P	P	P	P	P	P	P	P	P	P
7	AMARIKA BHALCHANDRA			P	P	P	P	P	P	P	P
8	Anjali Bhaskar	P	P	P	P	P	P	P	P	P	P
9	Anjali Damade	P	P	P	P	P	P	P	P	P	P
10	Anju Lata Malviya		P	P	P	P	P	P	P	P	P
11	Ankita Bais				P	P	P	P	P	P	P
12	Ankita singh	P	P	P	P	P	P	P	P	P	P
13	Antra Bhilatiya	P	P	P	P	P	P	P	P	P	P
14	Arpita Mishra		P	P	P	P	P	P	P	P	P
15	Baram tagore		P	P	P		P	P		P	
16	Bhagwan singh	P	P	P	P	P	P	P	P	P	P
17	Bharti Malakar		P	P	P	P	P	P	P	P	P
18	Burra sriraj		P	P	P	P	P	P	P	P	P
19	Chandan kamalpuriya	P	P	P	P	P	P	P	P	P	P
20	Chetan Thakkar			P			P	P	P	P	P
21	Deepika maru	P	P	P	P	P	P	P	P	P	P
22	Deepika Rathod	P	P	P	P	P	P	P	P	P	P
23	Garima Chourasiya	P	P	P		P		P	P	P	P
24	Gaurvi chourasia	P	P	P		P		P	P		
25	Hariom yadav	P	P	P		P		P	P		
26	Harshad lodwal	P	P	P		P		P	P		
27	Harshita Singh	P	P	P		P	P	P	P	P	
28	Himanshu Makwana	P	P	P	P	P	P	P	P	P	P
29	Ishika kusumakar		P		P	P	P		P	P	
30	Janhvi jaiswal	P	P	P	P	P	P	P	P	P	P
31	Javed patel			P		P	P	P		P	P
32	Jyoti Yadav	P	P	P	P	P	P	P	P	P	P
33	KAACHIA PATELHET		P	P	P	P	P			P	
34	Kailash	P	P	P	P	P	P	P	P	P	P
35	Kajal Baretha	P	P	P	P	P	P	P	P	P	P
36	Kajal jaiswal		P	P	P	P	P			P	
37	Kalpana kewat		P		P	P			P	P	
38	Karthik.s					P	P	P	P	P	P
39	Khyati Dubey	P	P	P	P	P	P	P	P	P	P
40	Lakavath Akhilmai	P			P	P		P		P	P
41	Mahima Goyal	P			P	P		P	P		P
42	Mahima patel	P			P	P	P	P	P		
43	Manju	P			P	P		P	P	P	
44	Minakshree Thakre	P			P	P	P	P	P		
45	Ms. AJAYA T DAS	P	P	P	P		P	P			
46	Muskan Kunhare	P	P	P	P			P	P		
47	Muskan sadh	P	P	P	P		P	P			
48	Nagma BEE	P	P		P	P	P	P	P	P	P
49	Namrata wankhede	P	P		P		P	P	P		
50	Nandini karla	P	P		P		P	P	P		
51	Nandini sharma	P	P				P	P	P	P	
52	Neha David	P	P	P	P	P	P	P	P	P	P
53	Nikky Jaj	P	P	P	P	P	P	P	P	P	P
54	Nishi Jain	P	P	P	P	P	P	P	P	P	P
55	Payal Bhabar	P	P	P	P	P	P	P	P	P	P
56	Pooja	P		P			P	P		P	P
57	pradeep kulhare	P	P	P			P	P		P	P
58	Pragya Upadhyay	P		P			P	P		P	P
59	Prashansa Dwivedi	P		P		P	P	P		P	P

60	Priyanshi Vishwakarma	P	P	P	P			P		P	P
61	R Anand			P	P	P		P	P	P	P
62	Ragani Ramje		P	P	P			P	P	P	P
63	Ravina Sable	P		P	P		P	P	P	P	P
64	Reena Sironiya		P	P	P	P		P		P	P
65	Ritika Koshti	P		P	P			P	P	P	P
66	Roshni kaushal			P	P		P	P	P	P	
67	Rubab Pipewala	P	P	P	P	P	P	P	P	P	P
68	Ruchita khandelwal	P	P	P	P	P	P	P	P	P	P
69	Sakshi Gupta	P		P	P		P	P	P		
70	Salluri sathvik	P		P		P	P	P	P		
71	Sandeep Shukya	P		P	P		P	P	P		
72	Savita Rani Malviya	P		P	P	P	P	P			
73	Shakti golkar	P		P	P	P	P			P	
74	Shalini Shrivastava	P	P	P	P	P	P	P	P	P	P
75	Shiva nagesh kadaverugu	P		P		P	P	P	P		
76	Shivanand Katare	P		P		P	P	P	P	P	
77	SHIVANI KANNOUJI	P		P		P		P	P		
78	Shivani soni	P		P		P	P		P	P	
79	Shivani Tiwari	P	P	P	P	P	P	P	P	P	P
80	Shubhi Tiwari	P	P	P	P	P	P			P	
81	Shweta Badole	P	P	P	P	P	P	P	P	P	P
82	Smita Lugun	P	P		P		P		P		P
83	Sonam shukla	P	P		P		P		P		P
84	Srishti dwivedi	P			P	P	P	P			
85	srishti satyam	P		P		P		P		P	P
86	Sudhir Kumar TIWARI	P	P		P		P		P		P
87	Sunkara Adarsh	P		P	P	P	P	P	P	P	
88	Swati Pandey	P	P		P		P		P		P
89	Tanisha Singh	P	P		P		P		P		P
90	Tanu Sirvaiya	P		P		P		P		P	P
91	Toshika Chauhan	P	P		P		P		P		P
92	Umesh Chouhan	P		P		P		P		P	P
93	Uzma Qureshi	P	P	P	P	P					P
94	Vaibhav jaiswal	P			P	P	P	P		P	P
95	YOGITA SONGARA	P	P	P	P	P	P	P	P	P	P

\*Course was held on Online Portal and the attendance was verified from the portal.

*Rishan P*


Head  
Department of Zoology



4.

## Role of Investigating Officer in Crime Scene

## 4.1 Brochure: -




**GOVT. HOLKAR [MODEL, AUTONOMOUS] SCIENCE COLLEGE, INDORE, M. P.**


Grade 'A' Accredited by 'NAAC'

**Department of Forensic Science**


**Value Added Course on "ROLE OF INVESTIGATING OFFICER IN CRIME SCENE"**  
(Session: 2021-22)

**Date: 02.01.2022 to 17.01.2022**






**Patron**  
Dr. Suresh T. Silawat  
Principal, Govt. Holkar Science College & Additional Director, Higher Education, Indore Division M. P.



**Head**  
Dr. Geetha Sarasan  
Department of Forensic Science, Govt. Holkar Science College, Indore, M. P.



**Resource Person**  
Mrs. Suchita Pandey  
Scientific Officer  
Police Training Campus, Indore, M.P.

**Organizing Secretaries**



**Prof. Harshita Sonkar**  
Department of Forensic Science, Govt. Holkar Science College, Indore M. P.



**Prof. Ruchi Sonowane**  
Department of Forensic Science, Govt. Holkar Science College, Indore M. P.

**Members of Organizing Committee**



**Prof. Ritu Bharti**  
Department of Forensic Science, Govt. Holkar Science College, Indore, (M. P.)



**Prof. Satish Rai**  
Department of Forensic Science, Govt. Holkar Science College, Indore, (M. P.)

**Technical Assistant: Mr. Magan Bhawar**

Link For Registration: <https://forms.gle/RSiZ3FWxYJjpY6Ez9>



#### 4.2 Permission: -

शा. होलकर (आदर्श,स्वशासी) विज्ञान महाविद्यालय, इन्दौर (म.प्र.)

फॉरेंसिक विज्ञान विभाग

प्रति,

प्राचार्य महोदय,

शा. होलकर विज्ञान महाविद्यालय,

इन्दौर (म.प्र.)।

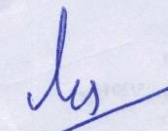
विषय:- Value added course करवाने की स्वीकृति विषयक।

महोदय,

विनम्र निवेदन है कि फॉरेंसिक विज्ञान विभाग द्वारा विषय सम्बन्धि 15 दिवसीय Value added course "ROLE OF INVESTIGATION OFFICER IN CRIME SCENE" दिनांक 2.01.2022 से 17.01.2022 तक प्रस्तावित है। कृपया स्वीकृति प्रदान करने की कृपा करें।

नेक के लिए भी इसका उल्लेख किया जाना है।

धन्यवाद।

  
विभागाध्यक्ष


Forensic Science Department  
Govt. Holkar Science College  
Indore (M.P.)



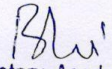
### 4.3 Syllabus: -

**Govt. Holkar (Model, Autonomous) Science College Indore, (M.P)**  
**Department of Forensic Science**  
**Session-2021-22**  
**Value Added Course on Role of Investigating Officer in**  
**Crime Scene**  
**Syllabus**

1.	Course Code – VACFS-2
2.	Value Added Course Title - Role of Investigating Officer at Crime Scene
3.	Course Outcomes – after study of this course students will come to - 1. Know about basic organizational structure of forensic laboratory 2. Illustrate basic classification of physical evidence 3. Recognize importance of Crime Scene Management 4. Describe various steps of crime scene management. 5. Interpret importance of chain of custody at scene of crime.
Unit	Topics
I	<b>Forensic Science:</b> Definition, History of forensic science, Organizational setup of Forensic Science laboratories, GEQDs, Fingerprint bureaus, DFS, Mobile Forensic laboratories. qualifications, Duties of Forensic Scientist at Forensic Science laboratory & SOC <b>Keywords:</b> Forensic Science, CFSL, FSL Organization, Fingerprint Bureaus.
II	<b>Physical Evidence:</b> Definition, Classification of Physical evidence, Different Search methods for physical evidences, Collection, Preservation, Packaging, Labeling, Sealing and Forwarding of Physical evidences, Chain of custody. <b>Keywords:</b> Search and seizure, Physical evidences, Chain of custody.
III	<b>Searching, Collection, Packing, Labeling and Forwarding of Biological Evidences from Scene of Crime:</b> Blood, Semen, Saliva, Bite marks, Vomit, Tears, Nails, Hair & Fiber, Botanical materials etc. <b>Keywords:</b> Biological evidences, Blood, Semen, Saliva, Hair and Fiber
IV	<b>Searching, Collection, Packing, Labeling and Forwarding of Chemical and Toxicological Evidences from Scene of Crime:</b> Cement, Mortar & Concrete, Explosive, Arson evidence, Wood, Petroleum products, Drugs and poisons, Viscera for toxicological analysis etc. <b>Keywords:</b> Chemical evidences, Cement, Explosives, Drugs and Poison.
V	<b>Searching, Collection, Packing, Labeling and Forwarding of Evidences related to Physics and Other impression from Scene of Crime:</b> Soil, Glass, Tool marks, Skid marks and Tire marks on various surfaces, Digital evidences, Fingerprints, Footprints, Documents, Weapon, Firearms etc. <b>Keywords:</b> Physical evidences, Soil, Glass, Impressions, Tool marks.

  
Coordinator, Board of Studies  
Govt. Holkar (Model Autonomous)  
Science College, Indore

Approved

  
Member Secretary, Academic Council  
Govt. Holkar (Model Autonomous)  
Science College, Indore

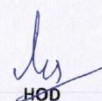


#### 4.4 Students List: -

**Govt. Holkar (Model Autonomous) Science College, Indore**  
Department of Forensic Science  
Value Added Course on Role of Investigating Officer in Crime Scene  
From 02.01.2022 to 17.01.2022  
**Attendance List**

S. No	Name	2	3	4	5	6	7	8	10	11	12	13	14	15	17	Total Presence (%)
1	Purna Patel	P	P	P	A	P	A	P	P	P	P	A	P	P	P	78.57142857
2	Rudrakshi Rathod	P	A	P	P	P	P	P	P	P	P	P	P	P	P	92.85714286
3	Shubhangi Purohit	P	P	P	P	P	P	P	P	P	P	P	P	P	P	100
4	Priya Kumbhkar	P	P	A	A	P	P	P	P	P	P	P	P	P	P	85.71428571
5	Milind Mandloi	P	P	P	P	P	P	A	P	P	P	A	P	P	P	85.71428571
6	Aaysha	P	P	P	P	P	P	A	P	P	P	A	P	P	P	85.71428571
7	Ragani Ramje	P	P	P	P	P	A	P	P	P	P	A	P	P	P	85.71428571
8	Suraj Pagare	P	P	A	P	A	P	P	P	P	P	P	A	P	P	85.71428571
9	Suraj	P	P	P	A	P	P	A	P	P	P	P	P	P	P	85.71428571
10	Muskan Suryawanshi	P	P	A	P	P	P	P	P	A	P	P	P	P	P	78.57142857
11	Miss Muskan Suryawanshi	P	P	P	P	A	P	P	P	P	P	A	P	P	P	85.71428571
12	Payal Patidar	P	P	P	P	P	P	P	P	P	P	A	P	P	P	85.71428571
13	Chanchal Prajapat	P	A	P	P	P	P	P	A	P	P	P	P	P	P	92.85714286
14	Tanu Khatri	P	P	P	P	P	P	A	P	P	P	P	P	P	A	85.71428571
15	Khushi Agrawal	P	P	P	A	P	P	P	P	P	P	P	P	P	P	92.85714286
16	Chandan Vaskel	P	A	P	P	P	P	P	P	P	P	P	A	P	P	85.71428571
17	Sneha Vashinde	P	P	P	P	P	P	A	P	P	A	P	P	P	P	85.71428571
18	Priyanka Kunwar	P	P	P	A	P	P	P	P	P	P	P	P	P	A	85.71428571
19	Zeenat Shaikh	P	P	P	P	P	P	P	P	P	P	P	A	P	P	85.71428571
20	Arpita Sen	P	P	P	P	P	P	A	P	P	P	A	P	P	P	85.71428571

21	Ankit Mahajan	P	P	P	P	A	A	P	P	P	P	P	P	P	P	85.71428571
22	Sapna Kumari	P	P	P	P	A	P	P	P	P	P	P	P	P	A	85.71428571
23	Anamika Pandey	P	P	P	P	A	P	P	P	P	A	P	P	P	P	85.71428571
24	Khushi Nema	P	P	A	A	P	P	P	P	P	P	P	P	P	P	85.71428571
25	Narayan Chouhan	P	P	P	P	P	P	A	P	P	P	P	A	P	P	85.71428571
26	Radhika Taneja	P	P	P	P	P	P	P	P	P	P	A	P	P	P	92.85714286
27	Aman Payasi	P	P	P	P	A	P	P	P	P	P	P	P	P	P	92.85714286
28	Pallavi Rahangdale	P	P	P	A	P	P	P	P	P	P	P	P	P	P	92.85714286
29	Trapti Prajapat	P	P	P	P	P	P	P	P	P	A	P	P	P	P	92.85714286
30	Pragya Kumari	P	P	P	P	P	P	A	P	P	P	P	P	P	A	85.71428571
31	Denisha Khadiya	P	P	P	P	P	P	P	P	P	A	P	P	P	P	92.85714286
32	Ishika Sugandhi	P	P	A	P	P	P	P	P	P	P	P	P	P	P	92.85714286
33	Shivani Yadav	P	P	P	P	P	P	A	P	P	P	P	P	P	P	92.85714286
34	Kratika Bhargava	P	P	P	P	P	P	P	P	P	P	P	P	P	A	82.85714286
35	Simran Malviya	P	P	P	P	A	P	P	P	A	P	P	P	P	P	85.71428571
36	Aruna Kumerkar	P	P	P	A	P	P	P	P	P	P	A	A	P	P	78.57142857

  
HOD

Department of Forensic Science  
Govt. Holkar Science College, Indore (M.P.)  
Forensic Science Department  
Govt. Holkar Science College  
Indore (M.P.)

5.

# Application of Statistics in Biosciences



## 5.1 Brochure: -

**Govt. Holkar (Model, Autonomous) Science College, Indore,  
M.P [INDIA]**

Grade "A" Accredited by NAAC

**DEPARTMENT OF BIOCHEMISTRY**

**Patron**  
**Dr. Suresh T. Silawat**  
Additional Director, Higher  
Education, Indore Division &  
Principal Govt. Holkar  
Science College, Indore

**Co-ordinator**  
**Dr. Angurbala Bafna**  
Associate Professor and  
Head  
Department of Biochemistry  
Govt. Holkar Science  
College, Indore

**Convenor:**  
**Prof. Tasneem Rangwala**  
(9826525394)

**Co-Convenor:**  
**Prof. Sheetal Uikey**  
(7013447507)

**Organising Secretary:**  
**Prof. Deepak Choudhary**  
(9630700490)

**Official Mail:**  
[biochem780@gmail.com](mailto:biochem780@gmail.com)

**Certificate course on**  
**"Applications of Statistics in Biosciences"**  
(Only for students and research scholar)

**Date:** 04<sup>th</sup> – 14<sup>th</sup> October 2021

**Platform:** Google Meeting App

**Last date for Appling:** 30<sup>th</sup> September 2021 till 5.00 PM

**Time :** 2:00 PM – 5.00 PM

**Registration fees :** 200/-

Pay the Admission fee (Rs. 200/-) online (NEFT/UPI) in the account:

**Account Name** :: PRINCIPAL HOLKAR SCIENCE COLLEGE

**Account Number** :: 31777055014

**Bank & Branch** :: STATE BANK OF INDIA, HOLKAR SCIENCE COLLEGE, A. B. ROAD, INDORE-452017

**IFSC** :: SBIN0030467

**Note :** **Kindly save the receipt of payment for the registration e- certificate will be given to qualified participants.**

**Registration link:** <https://forms.gle/ocykxcRRKBXbZTCn7>

This program empowers the participants to explore use of MS- Excel for calculating different statistical parameters and also build their capability to represent data in various ways. This will help in efficient research presentation. Knowledge of statistics will enable researchers to conduct research and also to present their results and conclusion in reader's friendly way.

- ❖ Attendance will be taken daily and 80% attendance is mandatory.
- ❖ 1:30 hrs theory + 1:30 hrs practice session in MS-Excel.
- ❖ Candidates should have their own laptop/PC for practice session.
- ❖ Quiz will be given daily and are compulsory.
- ❖ One final quiz on completion of course.
- ❖ Minimum 40% score is mandatory to get certificate.

## 5.2 Permission: -

**Govt. Holkar Science College Indore (M.P.)**  
**Department of Biochemistry**

Date - 07/09/2021

To,  
Principal

Govt. Holkar Science College,  
Indore (M.P.)

Subject: - Online Certificate course on "Applications of Statistics in Biosciences."

Respected Sir,

Regarding above subject, Biochemistry Department is proposing 10 Days Online Certificate course on "Applications of Statistics in Biosciences" from 6<sup>th</sup> - 18<sup>th</sup> October 2021. This certificate course will include all the four quadrants essential for creating MOOCs i.e. E-text, video lecture, suggested reading and quiz, so this course should be considered as MOOCs.

**The Details of the course are mentioned below.**

- |  |   |   |
|--|---|---|
| 1. Name of Online Certificate Course     | - | "Applications of Statistics in Biosciences"   |
| 2. Duration                              | - | 10 Days (1 × 3 hrs i.e. 30 hrs)   |
| 3. Course Content                        | - | As per syllabus approved by Board of Studies.                                       |
| 4. Mode                                  | - | On line mode Google meet online platform.   |
| 5. Registration fee                      | - | 200/- (No Loss no Profit)   |
| 6. Remuneration of guest Resource person | - | As per Government norms.  |
| 7. Subject Expert                        | - | Faculty of department and guest subject expert as resource person.                  |
| 8. Eligibility Criteria                  | - | Under graduate  |
| 9. No. of Seats                          | - | 50  |
| 10. Eligibility to get c- certificate    | - | On the basis of performance of participants through online MCQ test and Assignment. |
| 11. Grade                                | - | As per College exam pattern.  |
| 12. Expenditure                          | - | Depend on the registration fee collected.   |

Kindly grant us permission to organize the above certificate course and oblige.

7es  
Deep  
प्रचार्य  
शा. होलकर विज्ञान महाविद्यालय  
इन्दौर

HOB  
HEAD  
Department of Biochemistry  
Department of Biochemistry  
Holkar Science College, Indore



### **5.3 Syllabus: -**

**Department of Biochemistry**  
**Online Certificate Course**  
**“Application of Statistics in Biosciences”**

Duration: 12 Days (30 hrs)

Each session- 02:30 hrs

This course will help in efficient research presentation. Knowledge of statistics will enable researchers to conduct research and also to present their results and conclusion in reader's friendly way. This program empowers the participants to explore use of MS- Excel for calculating different statistical parameters and also build their capability to represent data in various ways.

- 1: Introduction and importance of statistics in Biosciences.
- 2: Graphical representation of ungrouped data- Line, Bar, Pie, Pictogram
- 3: Graphical representation of grouped data- Frequency Curve, Cumulative frequency, Histogram
- 4: Measures of Central tendency (Special reference to mean)
- 5: Measures of Dispersion (Special reference to SD)
- 6: Standard error
- 7: Correlation (Simple Correlation)
- 8: Regression equation
- 9: Normal Distribution Curve and critical region
- 10: Test of significance
- 11: Hypothesis and type of error

Dr. A. Bafna

Prof. R.S. Maheshwari

Prof. R.S. Gupta

Dr. Purnima Dey Sarkar

Prof. A.R. Batham

Mr. Rohan Gupta

Prof. Tasneem Rangwala

Prof. Sheetal Ukey

Prof. Deepak Choudhary

Mrs. Rajshree Kabra

**Department of Biochemistry**  
**Online Certificate Course**  
**“Application of Statistics in Biosciences”**

12: t-test

13: ANOVA (Analysis of Variance)

**Note:**

- Candidate should have their own laptop/PC for practice session.
- 1:30 hrs theory + 1:00 hrs practice session in MS-Excel.
- Assignment and quiz will be given daily.
- One final quiz on completion of course.
- Minimum 40% score is mandatory to get certificate.
- Feedback from candidates will be taken daily.

Dr. A. Bafna

Prof. R.S. Maheshwari

Prof. R.S. Gupta

Dr. Purnima Dey Sarkar

Prof. A.R. Batham

Mr. Rohan Gupta

Prof. Tasneem Rangwala

Prof. Sheetal Uikey

Prof. Deepak Choudhary

Mrs. Rajshree Kabra



## 5.4 Students List: -

### Department of Biochemistry Online certificate course Participant list

S.No.	Roll No.	Initials	Full Name	Fathers Name	Institution name	Grade
1	21OCASB1	Ms.	Aarti Kirade	Siyaram Kirade	Maharani Laxmi Bai PG girls, collage, Indore	A
2	21OCASB2	Ms.	Aarti Solanki	Ompakash Singh Solanki	Maharani Laxmi Bai PG girls, collage, Indore	A
3	21OCASB3	Mr.	Adarsh Shah Jaget	Ravi Shah Jaget	Govt. Holkar (Model, Autonomous) Science College, Indore	A+
4	21OCASB4	Mr.	Anrit Kumawat	Radheshyam Kumawat	Govt. Holkar (Model, Autonomous) Science College, Indore	A
5	21OCASB5	Ms.	Anjali Chaturvedi	Mr. Rajesh Chaturvedi	Govt. Holkar (Model, Autonomous) Science College, Indore	A+
6	21OCASB6	Ms.	Anjali Kewat	Kirtan Kewat	Govt. Holkar (Model, Autonomous) Science College, Indore	A
7	21OCASB7	Ms.	Anjali Temarnya	Shivprasad Temarnya	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	A
8	21OCASB8	Ms.	Ankita Tongya	Mr. Ashok Kumar Tongya	Govt. Holkar (Model, Autonomous) Science College, Indore	A
9	21OCASB9	Ms.	Ankita Vasuniya	Radhusingh Vasuniya	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	A
10	21OCASB10	Ms.	Antim Bhadoriya	Govind Singh Bhadoriya	Govt. Holkar (Model, Autonomous) Science College, Indore	A
11	21OCASB11	Ms.	Arti Tiwari	Mr. Ramesh Kumar Sharma	Govt. Holkar (Model, Autonomous) Science College, Indore	A+
12	21OCASB12	Ms.	Babli	Brajendra Singh	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	A
13	21OCASB13	Mrs.	Bavita Kohli	Prof. H K Khosla	IPS Academy, Indore	A+
14	21OCASB14	Ms.	Bhavna Prajapati	Tejram Prajapati	Govt. Holkar (Model, Autonomous) Science College, Indore	A
15	21OCASB15	Mr.	Deepak Mishra	Shravan Kumar Mishra	Govt. Holkar (Model, Autonomous) Science College, Indore	A+
16	21OCASB16	Ms.	Dikshika Shah	Yogesh Shah	Govt. Holkar (Model, Autonomous) Science College, Indore	A+

1

### Department of Biochemistry Online certificate course Participant list

17	21OCASB17	Mrs.	Durgesh Kevat	Rajmani Kevat	Govt. Holkar (Model, Autonomous) Science College, Indore	A+
18	21OCASB18	Ms.	Ganga Ajmera	Mangilal Ajmera	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	A
19	21OCASB19	Ms.	Greeshma Sahu	RAMESHWAR SAHU	Maharani Laxmi Bai PG girls, collage, Indore	A+
20	21OCASB20	Mr.	Jayant Tripathi	Sudhanshu Tripathi	Govt. Holkar (Model, Autonomous) Science College, Indore	A
21	21OCASB21	Ms.	Jigyasa Choudhary	Brajmohan Choudhary	Govt. Holkar (Model, Autonomous) Science College, Indore	A
25	21OCASB25	Ms.	Kirti Songade	Shankar Rao Songade	Maharani Laxmi Bai PG girls, collage, Indore	A
22	21OCASB22	Ms.	Mahima Dubey	Banshidhar Dubey	Maharani Laxmi Bai PG girls, collage, Indore	A
23	21OCASB23	Prof.	Mangla Dave	B. K. Dave	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	A+
24	21OCASB24	Ms.	Mansi Patidar	Sanjay Kumar Patidar	Govt. Holkar (Model, Autonomous) Science College, Indore	A
26	21OCASB26	Ms.	Mayuri Bisen	Late Dulichand Bisen	Govt. Holkar (Model, Autonomous) Science College, Indore	A+
27	21OCASB27	Mrs.	Monika Billore	Tukaram Billore	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	A
28	21OCASB28	Ms.	Nandini Kashyap	Ramshajivan Kashyap	Govt. Holkar (Model, Autonomous) Science College, Indore	O
29	21OCASB29	Ms.	Niharika Singh	Narendra Kumar Singh	Govt. Holkar (Model, Autonomous) Science College, Indore	A
30	21OCASB30	Ms.	Nikky Jaj	Mr. Rajesh Jaj	Govt. Holkar (Model, Autonomous) Science College, Indore	A
31	21OCASB31	Ms.	Pooja Pandey	Dayanidhi Pandey	Maharani Laxmi Bai PG girls, collage, Indore	A+
32	21OCASB32	Ms.	Pooja Patidar	Liladhar Patidar	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	A

2

**Department of Biochemistry**  
**Online certificate course**  
**Participant list**

33	21OCASB33	Ms.	Pooja Sharma	Dilip sharma	Maharani Laxmi Bai PG girls, collage, Indore	A
34	21OCASB34	Ms.	Prachi Pathak	Neeraj Pathak	Govt. Holkar (Model, Autonomous) Science College, Indore	A
35	21OCASB35	Mr.	Prashant Uikey	Hiralal Uikey	Govt. Holkar (Model, Autonomous) Science College, Indore	A+
36	21OCASB36	Ms.	Prasiddhi Tare	Sanjay Tare	Govt. Holkar (Model, Autonomous) Science College, Indore	A
37	21OCASB37	Mrs.	Preeti Shrivastava	Vinod Shrivastava	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	A
38	21OCASB38	Ms.	Priya Malviya	Mukesh Malviya	Govt. Holkar (Model, Autonomous) Science College, Indore	A
39	21OCASB39	Mrs.	Rajshree Kabra	Mahendra Kumar Jajoo	Govt. Holkar Science college, Indore (Research Scholar)	O
40	21OCASB40	Ms.	Priya Sisodiya	Gabru Sigh Sisodiya	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	A
41	21OCASB41	Ms.	Reena Soni	Madan Lal Soni	Govt. Holkar (Model, Autonomous) Science College, Indore	A
42	21OCASB42	Prof.	Renu Tiwari	Rakesh Dwivedi	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	A+
43	21OCASB43	Prof.	Ritcha Warma Gandhi	Prof. S.C. Warma	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	O
44	21OCASB44	Mr.	Sagar Chouhan	Kadwa Chouhan	Govt. Holkar (Model, Autonomous) Science College, Indore	A
45	21OCASB45	Prof.	Ritu Bharti	Mishrilal Bharti	Govt. Holkar (Model, Autonomous) Science College, Indore	A+
46	21OCASB46	Prof.	Rohit Verma	Babulal Verma	Govt. Holkar (Model, Autonomous) Science College, Indore	A+
47	21OCASB47	Ms.	Sameera Mansuri	A G Mansuri	Liberal College of Education, Rau, Indore	O
48	21OCASB48	Mr.	Sanjeev Dwivedi	Umesh Kumar Dwivedi	Govt. Holkar (Model, Autonomous) Science College, Indore	A+

3

**Department of Biochemistry**  
**Online certificate course**  
**Participant list**

49	21OCASB49	Mr.	Sanjeev Kumar Kushwah	Sirmam Singh Kushwah	Govt. Holkar (Model, Autonomous) Science College, Indore	A
50	21OCASB50	Prof.	Satish Rai	Buddhi Lal Rai	Govt. Holkar (Model, Autonomous) Science College, Indore	A+
51	21OCASB51	Ms.	Saunhya Shrivastava	Sanjay Shrivastava	Govt. Holkar (Model, Autonomous) Science College, Indore	A
52	21OCASB52	Ms.	Shaista Khan	Shamsuddin Khan	Govt. Holkar (Model, Autonomous) Science College, Indore	A
53	21OCASB53	Ms.	Shikha Gupta	Mahesh Kumar Gupta	Govt. Holkar (Model, Autonomous) Science College, Indore	A
54	21OCASB54	Ms.	Shivani Gangrade	Harish Gangrade	Govt. Holkar (Model, Autonomous) Science College, Indore	A
55	21OCASB55	Ms.	Shivani Rawat	Alam Singh Rawat	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	A
56	21OCASB56	Ms.	Shivani Meena	Kailash meena	Govt. Holkar (Model, Autonomous) Science College, Indore	A
57	21OCASB57	Ms.	Shivani Soni	Manoj Kumar Soni	Govt. Holkar (Model, Autonomous) Science College, Indore	A
58	21OCASB58	Mr.	Shubham Kumar Patel	Rameshwarnath Patel	Govt. Holkar (Model, Autonomous) Science College, Indore	A
59	21OCASB59	Ms.	Shubhangi Choudhary	Jhamsingh Choudhary	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	A+
60	21OCASB60	Mrs.	Shubhangi Chaudbey	Vimal Pandit	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	A
61	21OCASB61	Ms.	Shweta Prajapat	Ganesh Prajapat	Maharani Laxmi Bai PG girls, collage, Indore	A
62	21OCASB62	Ms.	Simran Maratha	Mukesh Rao Shinde	Govt. Holkar (Model, Autonomous) Science College, Indore	O
63	21OCASB63	Ms.	Sona Dangi	Narendra Dangi	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	A
64	21OCASB64	Ms.	Sonam Vishwakarma	Lalaram Vishwakarma	Govt. Holkar (Model, Autonomous) Science College, Indore	A+

4



**Department of Biochemistry**  
**Online certificate course**  
**Participant list**

65	21OCASB65	Ms.	Sonu Muzalda	Vijay Singh Muzalda	Maharani Laxmi Bai PG girls, collage, Indore	A
66	21OCASB66	Ms.	Suhana Chouhan	Mr. Shivveer Chouhan	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	A
67	21OCASB67	Ms.	Surabhi Agrawal	Shashidhar Agrawal	Govt. Holkar (Model, Autonomous) Science College, Indore	A
68	21OCASB68	Ms.	Surbhi Roychoudhary	Sandeep Roychoudhary	Govt. Holkar (Model, Autonomous) Science College, Indore	A+
69	21OCASB69	Ms.	Swati Mali	Laxminarayan Mali	Govt. Holkar (Model, Autonomous) Science College, Indore	O
70	21OCASB70	Ms.	Tanishka Singh	Pankaj Singh	Govt. Holkar (Model, Autonomous) Science College, Indore	A
71	21OCASB71	Ms.	Trapti Gaghoriya	Tilak Chand Gaghoriya	Govt. Mata Jija Bai Girls PG College, Moti Tabela, Indore	A
72	21OCASB72	Ms.	Veena Malviya	Vishnu Malviya	Govt. Holkar science College indore	A
73	21OCASB73	Mr.	Vikas Chouhan	Sukhlal Chouhan	Govt. Holkar (Model, Autonomous) Science College, Indore	A
74	21OCASB74	Mrs.	Yamini Magarde	Rameshwar Magarde	Maharani Laxmi Bai PG girls, collage, Indore	A
75	21OCASB75	Ms.	Yenuka Dhurve	Mangru Singh Dhurve	Govt. Holkar (Model, Autonomous) Science College, Indore	A

  
**Head**  
**Department of Biochemistry**  
**Department of Biochemistry**  
**Holkar Science College Indore**

6.

# Human Impact on Air Environment



## **6.1 Brochure: -**

**Value Added Course  
10 Days Training Project  
On  
“Human Impact on Air Environment”**



**Organized By :  
Department of Microbiology,  
Govt. Holkar Science College, Indore  
Dated: 01 December 2021 to 11 December 2021**

**Patron: Dr. Suresh T. Silawat,  
Additional Director, Indore-Division &  
Principal,  
Govt. Holkar Science College, Indore**

**Convenor: Dr. Sanjay Vyas  
Prof. & Head, Department of Microbiology**

**Venue  
Department of Microbiology,  
Govt. Holkar Science, College,**

**Registration: No Fee**



### **Committee**

**Patron:** Dr. Suresh T. Silawat, Additional Director,  
Indore-Division & Principal,  
Govt. Holkar Science College, Indore

**Convenor:** Dr. Sanjay Vyas, Prof. & Head,  
Govt. Holkar Science College, Indore

**Organizing Secretaries:** Dr. Deepti Khare ,  
Prof. Anuja Sharma

**Committee Members:** Dr. Radhika Waghmare  
Prof. Nidhi Kibe  
Mrs. Ranjeeta Prajapati  
Mr. Dileep Jacob  
Mrs. Neha Sharma

**Speakers:** Day 01 – Dr. Sanjay Vyas  
Day 02 – Prof. Anuja Sharma  
Day 03 – Dr. Deepti Khare



## **6.2 Permission: -**

सूक्ष्मजैविकी विभाग, शा० होलकर विज्ञान महाविद्यालय,  
इन्दौर, (म०प्र०)

क्रमांक ...../सूक्ष्मजैविकी/2021

दिनांक: 29/11/2021

प्रति,

प्राचार्य महोदय,  
शास० होलकर विज्ञान महा०,  
इन्दौर, (म०प्र०)

विषय :- 10 दिवसीय ट्रेनिंग प्रोजेक्ट कराने की अनुमति विषयक।

महोदय,

उपरोक्त विषयान्तर्गत अनुरोध है, कि महाविद्यालय के सूक्ष्मजैविकी विभाग द्वारा विद्यार्थियों हेतु दस दिवसीय **Training Project "Human Impact on Air Environment"** दिनांक 01/12/2021 से 11/12/2021 तक विभाग में आयोजित किया जाना प्रस्तावित है।

कृपया **NAAC Visit** को दृष्टिगत रखते हुये उक्त ट्रेनिंग प्रोजेक्ट को करवाने की अनुमति प्रदान करने का कष्ट करें।

डॉ. संजय व्यास  
विभागाध्यक्ष  
सूक्ष्मजैविकी विभाग

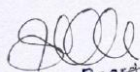
Yes  
  
30/11/21


### **6.3 Syllabus: -**

**Govt. Holkar (Model Autonomous) Science College, Indore**  
**Department of Microbiology**  
**Session: 2021-22**  
**Syllabus For Value Added Course**  
**Title: Human Impact on Air Environment**

Unit	Topics
1	Aerobiology: - Definition, branches of aero microbiology, history of aero- microbiology, composition of air, microorganism present in air. Air environments.
2	Aeroallergens, infection transfer, Droplet nuclei & aerosol.
3	Assessment of air quality-History, air quality, air pollutants, effects on biodiversity, air pollution control, methods of air quality of assessment.
4	Bacterial, fungal and viral diseases transmitted through air and their preventive measures.

**Approved**

  
Chairperson, Board of Studies  
Govt. Holkar (Model Autonomous)  
Science College, Indore

  
Member Secretary, Academic Council  
Govt. Holkar (Model Autonomous)  
Science College, Indore



## 6.4 Students List: -

GOVT. HOLKAR SCIENCE COLLEGE, INDORE  
DEPARTMENT OF MICROBIOLOGY  
VALUE ADDED COURSE FOR MICROBIOLOGY  
STUDENTS ENROLLED IN THE 10 DAYS TRAINING PROJECT

S.NO.	NAME OF STUDENT	DATE	SIGN
1	Smriti Gohil	1/12/2021	Smriti
2	Pranika Patil	01/12/2021	Pranika
3	Shivani Acharya	01/12/2021	Shivani
4	Reshu Soni	01/12/2021	Reshu
5	Ishika Sahu	01/12/2021	Ishika
6	Akansa Sahu	01/12/2021	AK
7	Shweta Sharma	1/12/2021	Shweta
8	Sweeti Sharma	01/12/2021	Sweeti
9	Kanika Kushwah	01/12/2021	Kanika
10	Shivani moyade	01/12/2021	Shivani
11	Saakshi Parmar	01/12/2021	Saakshi
12	Astha Shukla	01/12/2021	Ashutosh
13	Muskan Yadav	01/12/2021	Muskan
14	Neha Mangwani	01/12/2021	Neha
15	Nikita Holkar	01/12/2021	Nikita
16	Vandana Sen	01/12/2021	V.Sen
17	Dipti Sanodiya	01/12/2021	Sanodiya
18	Sahiba Gidwar	01/12/2021	Sahiba
19	Shivani Patidar	01/12/2021	Shivani
20	Sakshi Dubey	01/12/2021	Dubey
21	Nidhi Kishore	01/12/2021	Nidhi
22	Alfiya Mansuri	01/12/2021	Alfiya
23	Anita Goyal	01/12/2021	Anita
24	Rakul Dadiya	01/12/2021	Rakul
25	Ragini Katta	01/12/2021	Ragini
26	Pankaj Kumar	1/12/2021	Pankaj
27	Deepika Shah	1/12/2021	Shah
28	Monika Gami	1/12/2021	Monika
29	Kirti Bhargava	1/12/2021	Kirti
30	Shubham Kumar	1/12/2021	Shubham

S.NO.	NAME OF STUDENT	DATE	SIGN
31	Neha Gautam	1/12/21	Neha Gautam
32	Pooanima Gupta	1/12/21	Pooanima
33	Tanvi Yadav	1/12/21	Tanvi
34	Narendra Yadav	1/12/21	Narendra
35	Prashant Singh	1/12/21	Prashant
36	Monika Soni	1/12/21	Monika
37	Sheetal Soni	1/12/21	Sheetal Soni
38	Arun Rawat	1/12/21	Arun Rawat
39	Rohit Kumar Pachla	1/12/21	Rohit
40	JYOTI RAJPUT	1/12/21	Jyoti
41	Ayushi Dixit	1/12/21	Ayushi
42	Pallavi Kartikey	1/12/21	Pallavi
43	Pallavi Nikumbhe	1/12/21	Pallavi
44	Shivani Gupta	1/12/21	Shivani
45	Priyal Patidar	1/12/21	Priyal
46	Sonali Gurjar	1/12/21	Sonali
47	Amisha Kholotiya	1/12/21	Amisha
48	Devashi Kothari	1/12/21	Devashi
49	Jyoti Salanki	1/12/21	Jyoti
50	Aditi Kulkarni	1/12/21	Aditi



7.

# An Introduction to Drugs & Medicine

## **7.1 Brochure: -**



**Govt, Holkar (Model, Autonomous ) Science College, Indore , M.P.**

### **An Introduction to Drugs & Medicines**

**( A value added course offered by the department of Pharmaceutical Chemistry )**

**Course Code-**

**Duration -** 30 hrs.

**Offered to-** Students of all streams UG

**Mode** Online (LMS platform)

**Learning Objectives:** The course is intended

1. To familiarise the student about various dosage forms, components, categories and label of Medicines.
2. To sensitise the student about the buying, using, storing and side effects of Medicines
3. To gain insights about various stages of drug development and about current therapies.
4. To understand the concepts of traditional medicines, standards for medicines and regulation of medicines.
5. To gain the skill in extraction, evaluation and labelling of medicines.

#### **Course Content**

Know your Medicine: What are Medicines? Food/ Nutrition vs Medicine.

Using Medicines (Dosage Forms): Buying and storing medicines at home.

Drugs or Medicine Discovery: Some historical perspectives of drug discovery.

Herbal, Ayurvedic and Siddha Medicines: Basic concepts.

Standards, Quality and Regulation of Medicines: Basic concepts of quality with respect to medicinal products.

#### **Course Planners**

1. Dr. M. K. Dwivedi , HOD, Dept. of Pharmaceutical Chemistry
2. Dr. Rashmi Agarwal, Prof. , Pharmaceutical chemistry



## **7.2 Syllabus: -**

**Govt. Holkar (Model Autonomous) Science College, Indore**  
**Department Of Pharmaceutical Chemistry**  
**Value Added Course on An Introduction to Drugs and Medicines**  
**Syllabus**

**Learning Objectives:** The course is intended;

1. To familiarise the student about various dosage forms, components, categories and label of Medicines.
2. To sensitise the students about the buying, using, storing and side effects of Medicines.
3. To gain insights about various stages of drug development and about current therapies.
4. To understand the concepts of traditional medicines, standards for medicines and regulation of medicines.
5. To gain the skill in extraction, evaluation and labelling of medicines.

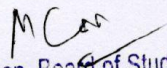
**Course Outcomes:** Upon completion of the course, the student will be able to;

1. Explain the various dosage forms, components, categories and labelling of Medicines.
2. Gain awareness about buying, using, storing and side effects of Medicines.
3. Understand about various stages of drug development and about current therapies.
4. Appreciate the concepts of traditional medicines, standards for medicines and regulation of medicines.
5. Extract, evaluate and label the medicines.

### **Theory (18 Hours)**

#### **Unit-I**

Know your Medicine: What are Medicines? Food/ Nutrition vs Medicine. Brief description of some common Dosage forms of Medicines: Tablets, Capsules, Liquids, Suspensions, Injectables, Non-oral dosage forms etc. Components of a Medicine (Dosage form). Generic and Branded medicines. Therapeutic, Prophylactic and Nutritional supplement dosage forms. Dosage strength and how to read the label of Medicines. Idea of Batch, Manufacturing and Expiry Dates.

  
Chairperson, Board of Studies  
Govt. Holkar (Model Autonomous)  
Science College, Indore



## **Unit-II**

Using Medicines (Dosage Forms): Buying and storing medicines at home. Concept of Dosage frequencies and its variation. Reasons for before or after food dose. Do's and Don'ts with special dosage forms (enteric or extended release etc). Handling sterile dosage forms and the relevant precautions. Antibiotics, and their responsible use. Concepts of adverse effects and its reporting. Do's and Don'ts on Medicines for chronic conditions such as Diabetes, Hypertension etc.

## **Unit-III**

Drugs or Medicine Discovery: Some historical perspectives of drug discovery examples such as Aspirin, Penicillin, Quinine, etc. Natural drugs to Modern drugs. Outline of modern drug discovery process. Safety evaluation and Efficacy Evaluation etc. Some modern advances such as Gene Therapy, Stem cell therapy etc.

## **UNIT-IV**

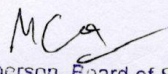
Herbal, Ayurvedic and Siddha Medicines: Basic concepts. Common Traditional Remedies and Illustrative examples of popular plant drugs used in the above systems of medicines, their therapeutic constituents and uses. Awareness about problems or quality issues associated with marketed herbal products and their reliability.

## **UNIT-V**

Standards, Quality and Regulation of Medicines: Basic concepts of quality with respect to medicinal products and how it is ensured. Pharmacopoeias and Standards associated with medicine manufacture. Outline of structure and functions of Drug Control and other relevant Bodies such as NPPA, Scope and purpose of Drugs and Cosmetic Act etc.

### **Practicals: (12 Hours)**

1. Preparation of labels for pharmaceutical dosage forms
2. Extraction of crude drugs
3. Evaluation of dosage forms
4. Evaluation of crude drugs.

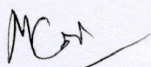
  
Chairperson, Board of Studies  
Govt. Holkar (Model Autonomous)  
Science College, Indore



**References:**

1. Allen, (2018), Ansel's Pharmaceutical Dosage Forms and Drug Delivery
2. System, Wolters Kluwer India Pvt. Ltd.
3. Mohantha G P, (2017), Textbook of Clinical Research, PharmaMed
4. Press/BSP Books
5. Wallis T E, (2005), Textbook of Pharmacognosy, CBS
6. Indian Pharmacopoeia
7. Central Drugs Standard Control Organization (CDSCO):  
<https://cdsco.gov.in/opencms/opencms/en/Home/>

Approved



Chairperson, Board of Studies  
Govt. Holkar (Model Autonomous)  
Science College, Indore



Member Secretary, Academic Council  
Govt. Holkar (Model Autonomous)  
Science College, Indore



### 7.3 Students List: -

**Govt. Holkar (Model Autonomous) Science College, Indore**  
**Department Of Pharmaceutical Chemistry**  
**Value Added Course on An Introduction to Drugs and Medicines**  
**Students List**

S. No.	Name	Gender	Father's Name	Mother's Name	Category	Class
1	Minal Kanungo	Female	Jayesh Kanungo	Anita Kanungo	UR	B.Sc. III year
2	Aaliya Khan	Female	Md. Ayub Khan	Tabassum Khan	OBC	B.Sc. III year
3	Abhishek Chaudhary	Male	Mahesh Chaudhary	Kiran Choudhary	OBC	B.Sc. III year
4	Abhishek Singh	Male	Harendra Singh	Meena Singh	OBC	B.Sc. I year
5	Adarsh Mandloi	Male	Rakesh Mandloi	Seema Mandloi	OBC	B.Sc. I year
6	Aditi Reniwal	Female	Sanjay Reniwal	Shweta Reniwal	OBC	B.Sc. I year
7	Aishwarya Pillai	Female	Mohan Pillai	Ramse Pillai	UR	B.Sc. III year
8	Akshita Tiwari	Female	Mr. Jay Tiwari	Mrs. Shraddha Tiwari	UR	B.Sc. III year
9	Aman Eshikar	Male	Hiralal Eshikar	Surekha Eshikar	SC	B.Sc. II year
10	Anchal Gupta	Female	Mr Ram Gopal Gupta	Mrs. Shobha Gupta	UR	B.Sc. II year
11	Aniket Kushwaha	Male	Shri Indrabhan Kushwaha	Gayatree Kushwaha	OBC	B.Sc. I year
12	Anurag Dawar	Male	Dongarsingh Dawar	Rekha Dawar	ST	B.Sc. III year
13	Anushka Singh Thakur	Female	Hemant Singh Thakur	Archana Singh Thakur	UR	B.Sc. III year

MC-9

14	Arpit Bhuriya	Male	Manvel Bhuriya	Vandana Bhuriya	ST	B.Sc. III year
15	Awani Sharma	Female	Madhusudan Sharma	Ranjna Sharma	UR	B.Sc. I year
16	Babita Meda	Female	Karan Meda	Mamta Meda	ST	B.Sc. III year
17	Chetan Chouhan	Male	Toburam Chouhan	Padmavati Chouhan	OBC	B.Sc. II year
18	Chetna Rawat	Female	Ratansingh Rawat	Sena Rawat	ST	B.Sc. III year
19	Chinmay Shaliya	Male	Ravindra Shaliya	Priya Shaliya	OBC	B.Sc. III year
20	Devaryan Kaushal	Male	Sunil Kaushal	Barkha Kaushal	OBC	B.Sc. III year
21	Dheeraj Satpute	Male	Santosh Satpute	Anjana Satpute	OBC	B.Sc. II year
22	Dheeraj Yadav	Male	Rakesh Kumar Yadav	Guddi Yadav	OBC	B.Sc. III year
23	Ekta Malviya	Female	Ashok Malviya	Manjula Malviya	SC	B.Sc. III year
24	Ganesh Sagar	Male	Duleshing	Radha	OBC	B.Sc. III year
25	Golu Muwel	Male	Ramesh Muwel	Buribai Muwel	ST	B.Sc. III year
26	Gopal Machar	Male	Kanhaiyalal Machar	Sita Machar	ST	B.Sc. I year
27	Govind Patidar	Male	Omprakash Patidar	Ramsukhi Bai Patidar	OBC	B.Sc. III year
28	Haribala Carpenter	Female	Pyarelal Carpenter	Asha Carpenter	OBC	B.Sc. I year
29	Hariom Choudhary	Male	Kailash Choudhary	Kavita Choudhary	OBC	B.Sc. III year
30	Hariom Choudhary	Male	Jitendra Choudhary	Laxmi Choudhary	OBC	B.Sc. III year
31	Harshita Malviya	Female	Azad Singh Malviya	Anita Malviya	SC	B.Sc. I year
32	Harshita Rathore	Female	Badrilal Rathore	Sangeeta Rathore	OBC	B.Sc. I year

MC-9



33	Kajal Yadav	Female	Shiv Shankar Yadav	Rita Yadav	OBC	B.Sc. I year
34	Kapil Bairagi	Male	Shivdas Bairagi	Savita Bairagi	OBC	B.Sc. I year
35	Karan Ahirwar	Male	Mr. Hemraj	Mrs. Guddi Bai	SC	B.Sc. I year
36	Kashish Tiwari	Female	Umesh Tiwari	Pushpa Tiwari	UR	B.Sc. I year
37	Kavita Kanash	Female	Devising Kanash	Gangabai Kanash	ST	B.Sc. I year
38	Khushal Ujle	Male	Rajendra Ujle	Kavita Ujle	SC	B.Sc. I year
39	Khushboo Bhuarya	Female	Milan Singh Bhuarya	Saroj Bhuarya	ST	B.Sc. I year
40	Khushi Tripathi	Female	Prabhakar Tripathi	Rekha Tripathi	UR	B.Sc. I year
41	Khushi Verma	Female	Santosh Verma	Jyoti Verma	ST	B.Sc. III year
42	Kiran Shaktawat	Female	Chandraveer Singh Shaktawat	Beenu Shaktawat	UR	B.Sc. I year
43	Komal Gehlod	Female	Radheshyam Gehlod	Mamta Gehlod	OBC	B.Sc. III year
44	Kuldeep	Male	Tejalal	Alka	OBC	B.Sc. I year
45	Lavika Ranawat	Female	Mr. Bheru Singh Ranawat	Kalpna Ranawat	UR	B.Sc. III year
46	Manisha Rathore	Female	Manohar Rathore	Sunita Rathore	OBC	B.Sc. III year
47	Mansi Pardeshi	Female	Ravindra Pardeshi	Rajni Pardeshi	OBC	B.Sc. I year
48	Md Adil Ghor	Male	Md Rafiq	Samina	OBC	B.Sc. I year
49	Muskan Malviya	Female	Sunil Malviya	Savita Malviya	SC	B.Sc. I year
50	Muskan Mathaniya	Female	Bherulal Mathaniya	Basanti Mathaniya	SC	M.Sc. Previous

MCA

51	Navyansh Dwivedi	Male	Anil Kumar Dwivedi	Sanat Kumari Dwivedi	UR	B.Sc. II year
52	Neha Badodiya	Female	Rameshchandra Badodiya	Mamta Badodiya	SC	B.Sc. I year
53	Neha Chowhan	Female	Sudhir Chowhan	Chhaya Chowhan	UR	B.Sc. I year
54	Neha Rajbhar	Female	Ramasharya Rajbhar	Sushila Rajbhar	UR	B.Sc. II year
55	Neha Solanki	Female	Daulatram Solanki	Sunita Solanki	SC	B.Sc. I year
56	Nikhil Khan	Female	Shehzad Khan	Shaheen Khan	OBC	B.Sc. III year
57	Nikhil Gupta	Male	Manoj Gupta	Sandhya Gupta	UR	B.Sc. I year
58	Nikita Malviya	Female	Dashrath Malviya	Mamta Malviya	SC	B.Sc. II year
59	Nikita Mishra	Female	Naval Kishore Mishra	Renu Mishra	UR	B.Sc. III year
60	Pankaj Choure	Male	Suresh Choure	Malti Choure	OBC	B.Sc. II year
61	Pavan	Male	Kalusing	Dropati	ST	B.Sc. III year
62	Piyush Kumrawat	Male	Satyanarayan Kumrawat	Laxmi Kumrawat	OBC	B.Sc. I year
63	Piyush Maru	Male	Santosh Maru	Ramkanya Maru	OBC	M.Sc. Previous
64	Poornima Kushwaha	Female	Premlal Kushwaha	Sandhya Kushwaha	OBC	B.Sc. III year
65	Prashant Mahour	Male	Balkishan Mahour	Rajani Mahour	SC	B.Sc. I year
66	Pratiksha Singh	Female	Nagendra Singh	Sanyogita Singh	OBC	B.Sc. III year
67	Pratiksha Vaidya	Female	Govind Vaidya	Supriya Vaidya	UR	B.Sc. III year
68	Preeti Rathore	Female	Prehelad Rathore	Anita Rathore	SC	B.Sc. I year

MCA



69	Pritendra Singh Tiwari	Male	Mrigendra Singh Tiwari	Pratima Tiwari	UR	B.Sc. III year
70	Priti Baiga	Female	Mr. Sukhdayal Baiga	Mrs. Ramkali Baiga	ST	B.Sc. I year
71	Priya Yadav	Female	Mahendra Yadav	Sulochana Yadav	OBC	B.Sc. III year
72	Priyanshu Tiwari	Male	Yogesh Tiwari	Sangeeta Tiwari	UR	B.Sc. II year
73	Pushpraj Singh Patel	Male	Shiv Kumar Patel	Anita Patel	OBC	B.Sc. I year
74	Raj Kuwar Singh	Male	Arvind Singh	Rekha Singh	UR	B.Sc. II year
75	Rajkumar Goyal	Male	Banesingh Goyal	Ramkunvar Goyal	SC	B.Sc. I year
76	Rakhi Pathak	Female	Ramsevak Pathak	Urmila Pathak	UR	B.Sc. III year
77	Ram Sharma	Male	Rajesh Ji	Rekha Ji	UR	B.Sc. I year
78	Ravindraa Khalya	Female	Sanjay Khalya	Seema Khalya	OBC	B.Sc. III year
79	Rinku Pagare	Female	Dinesh Pagare	Anita Pagare	SC	B.Sc. II year
80	Rinku Pal	Female	Rajkumar Pal	Rani Pal	OBC	B.Sc. I year
81	Ritika Saini	Female	Rajkumar Saini	Hemlata Saini	OBC	B.Sc. III year
82	Romit Mandloi	Male	Omprakash Mandloi	Sarla Mandloi	OBC	B.Sc. III year
83	Sachin Vishwakarma	Male	Raysingh Vishwakarma	Reena Bhai Vishwakarma	OBC	B.Sc. I year
84	Sagar Patel	Male	Ramcharit Patel	Sangeeta Patel	OBC	B.Sc. II year
85	Saloni Solanki	Female	Aatmaram Solanki	Kanti Solanki	SC	B.Sc. I year


MC

86	Sandhya Kirar	Female	Hawaladar Singh Kirar	Premwati Kirar	SC	B.Sc. II year
87	Sandhya Sangat	Female	Sanjay Sangat	Komal Sangat	SC	B.Sc. II year
88	Sanjay Kanesh	Male	Ramsingh Kanesh	Kelbai Kanesh	ST	B.Sc. II year
89	Saroj Solanki	Female	Rajkumar Solanki	Sudha Solanki	SC	B.Sc. I year
90	Satyam Harod	Male	Mohanlal Harod	Deena Harod	OBC	B.Sc. II year
91	Shagun Gautam	Female	Mr. Rakesh Gautam	Mrs. Vandana Gautam	UR	B.Sc. II year
92	Shashank Pateriya	Male	Shailendra Pateriya	Shadhana Pateriys	UR	B.Sc. II year
93	Shivani Singhwane	Female	Ramjeevan Singhwane	Varsha Singhwane	OBC	B.Sc. II year
94	Shreya Patidar	Female	Rajesh Patidar	Urmila Patidar	OBC	B.Sc. II year
95	Shruti Mudafale	Female	Shravan Mudafale	Surekha Mudafale	OBC	B.Sc. II year
96	Shubham Gangajal	Male	Mr. Narendra Gangajal	Mrs. Sukma Gangajal	OBC	B.Sc. II year
97	Shubham Kumar Jha	Male	Shubhash Chandra Jha	Shobha Devi	UR	B.Sc. II year
98	Shubham Tiwari	Male	Rakesh Tiwari	Savita Tiwari	UR	B.Sc. II year
99	Sneha Pawar	Female	Mr. Arvind Pawar	Mrs. Sarita Pawar	OBC	B.Sc. II year
100	Sonali Yadav	Female	Jay Prakash Yadav	Suman Yadav	OBC	B.Sc. II year
101	Sourabh Ganeshe	Male	Yashwant Raw Ganeshe	Swarnlata Ganeshe	SC	B.Sc. II year
102	Swapnil Singh	Male	Ranbahadur Singh	Meenu Singh	OBC	B.Sc. II year
103	Swati Korsane	Female	Mr. Kashiram Korsane	Mrs. Durga Devi Korsane	OBC	B.Sc. I year

MC



104	Swati Sharma	Female	Rajesh Sharma	Jyoti Sharma	UR	B.Sc. I year
105	Tanupriya Chouhan	Female	Dinesh Chouhan	Maya Chouhan	OBC	B.Sc. III year
106	Urusha Gouri	Female	Mohd. Yunus Gouri	Rafatjahan Gouri	OBC	B.Sc. I year
107	Urvashi Churiya	Female	Gangaram Churiya	Babita Churiya	SC	B.Sc. III year
108	Vallari Chaskar	Female	Charudatta Chaskar	Vishranti Chaskar	UR	B.Sc. I year
109	Vedant Dongre	Male	Prem Kumar Dongre	Nilangi Dongre	SC	B.Sc. III year
110	Vijay Chouhan	Male	Gopal Chouhan	Rekha Chouhan	SC	B.Sc. III year
111	Vikas Bandh Goswami	Male	Prem Bandh Goswami	Dhankuwar Bai	OBC	B.Sc. II year
112	Vinay Raj Rathore	Male	Ramanath Singh Rathore	Sonu Rathore	UR	B.Sc. I year
113	Vinita Baraskar	Female	Rajesh Baraskar	Kavita Baraskar	OBC	B.Sc. II year
114	Vishakha Belsare	Female	Ramesh Belsare	Manisha Belsare	OBC	B.Sc. III year
115	Vishal Patel	Male	Mahesh Patel	Bhavana Patel	OBC	B.Sc. I year
116	Yash Prajapati	Male	Ravishankar Prajapati	Rajni Prajapati	OBC	B.Sc. I year
117	Yukti Patle	Female	Shri Khuman Singh Patle	Smt Jasan Patle	OBC	B.Sc. II year

  
**PROFESSOR & HEAD**  
 Deptt. of Pharmaceutical Chemistry  
 Govt. Holkar Science College  
 INDORE (M.P.)

8.

# Basic Programming with Python



## 8.1 Brochure: -

The screenshot displays the website of Government Holkar (Model, Autonomous) Science College, Indore (M.P.), India. The page features a navigation bar with links to HOME, ABOUT US, COURSES, CLASSES, WEBINARS / CONFERENCES, MY CITATION, SCANNER, and CONTACT. The main content area is titled "Certificate Course On Basic Programming with Python" and is organized by the Department of Electronics. The course features include:

- Duration: 165
- Start Date: 17/01/2022
- End Date: 30/06/2022
- Reg. Start Date: 04/01/2022
- Reg. End Date: 20/01/2022
- Certificate: YES
- Open Access: NO
- Registration Link: [Link]

The course code is ELEX2102. A "Start Course" button is visible. The footer mentions that Python is a popular programming language created by Guido van Rossum in 1991.

## 8.2 Permission: -

इलेक्ट्रॉनिक्स विभाग, शासकीय (आदर्श, स्वशासी) होलकर विज्ञान महाविद्यालय, इन्दौर (म.प्र.)

क्रमांक.....

प्रति,

इन्दौर, दिनांक 24/02/2022

प्राचार्य,

शासकीय होलकर विज्ञान महाविद्यालय,

इन्दौर (म.प्र.)

विषय : इलेक्ट्रॉनिक्स विभाग द्वारा सर्टिफिकेशन कोर्स करने बाबत प्रस्ताव।  
महोदय,

इलेक्ट्रॉनिक्स विभाग द्वारा Python विषय पर 6 माह के सर्टिफिकेट कोर्स आयोजित करने का प्रस्ताव निम्नानुसार प्रस्तुत है -

1. कोर्स का नाम - Certificate Course on Basic Programming with Python
2. अवधि - 60:00 घंटे
3. कोर्स प्रारंभ करने की तिथि - 26 फरवरी 2022 से प्रारंभ
4. कोर्स के विषय पाठ्यक्रम - इलेक्ट्रॉनिक्स विषय के अध्ययन मण्डल (बोर्ड ऑफ स्टडी) द्वारा सर्टिफिकेट कोर्स हेतु अनुमोदित पाठ्यक्रम (सलग्न)
5. रिसोर्स पर्सन (विषय विशेषज्ञों की जानकारी) इन्दौर शहर में Python के क्षेत्र में कार्यरत कम्पनी के इंजीनियरों को आमंत्रित किया जाएगा।
6. विषय विशेषज्ञों को मानदेय नियमानुसार राशि रु 1000 प्रति व्याख्यान (90 मिनट) के दर से देय होगा।
7. कोर्स के लिए अर्हता - कक्षा 12वीं एवं किसी भी विषय में बी.एस.सी. उत्तीर्ण या अध्ययनरत विद्यार्थी इस कोर्स के लिए अर्ह है।
8. कोर्स फीस एवं परीक्षा शुल्क - रु 1000 + 200/- प्रति अभ्यर्थी
9. संभावित प्रतिभागियों की संख्या - 50
10. फीस द्वारा प्राप्त होने वाली संभावित आय - रु 60,000/-
11. महाविद्यालय से प्राप्त Seed money - नहीं
12. कुल संभावित आय रु - 60,000/-
13. कुल आय रु - 60,000/-



14. विषय विशेषज्ञों के मानदेय पर संभावित कुल व्यय रू - 40,000/-
15. परीक्षा शुल्क - 10,000/-
16. स्टेशनरी, कम्प्यूटर स्टेशनरी, फोटो कॉपी एवं अन्य स्टेशनरी आदि पर व्यय-5000/-
17. अन्य विविध व्यय एवं आकस्मिक व्यय - 5000/-
18. कुल संभावित व्यय रू. - 60,000/-

इस सर्टिफिकेट कोर्स के लिए नियमित कक्षाएँ प्रतिदिन प्रातः 12:00 से 3:00PM तक इलेक्ट्रॉनिक्स विभाग में आयोजित की जाएंगी। इस कोर्स के लिए परीक्षा विभाग द्वारा परीक्षा आयोजित की जावेगी जिसके अन्तर्गत सैद्धांतिक एवं प्रयोगिक परीक्षा आयोजन होगा। सफल अभ्यर्थियों को सर्टिफिकेट प्रदान किए जावेगे।

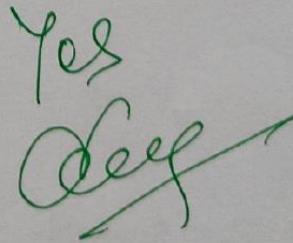
कृपया इस कोर्स को आयोजित करने हेतु अनुमति विभाग को प्रदान करने का कष्ट करें।



डॉ. नेतराम कौरव  
विभागाध्यक्ष  
इलेक्ट्रॉनिक्स विभाग

संलग्न:-

1. अध्ययन मण्डल के सदस्यों द्वारा अनुमोदित पाठ्यक्रम की प्रतिलिपी।



### **8.3 Syllabus: -**

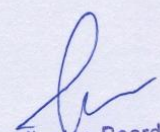
**Govt. Holkar (Model, Autonomous) Science College, Indore**  
**Department of Electronics**  
**Syllabus Session 2021-22**


Title of Certificate Course:	Basic Programming with Python
Course Code	PYTH
Credit	4

Part A : Introduction		
1	Certificate Course Description	This course provides an introduction to programming and the Python language. Students are introduced to core programming concepts like data structures, conditionals, loops, variables, and functions. This course includes an overview of the various tools available for writing and running Python, and gets students coding quickly. It also provides hands-on coding exercises using commonly used data structures, writing custom functions, and reading and writing to files. This course may be more robust than some other introductory python courses, as it delves deeper into certain essential programming topics.
2	Pre-requisite (if any)	10+2 with Science
3	Course Objective	The course is designed to provide Basic knowledge of Python. Python programming is intended for software engineers, system analysts, program managers and user support personnel who wish to learn the Python programming language.
4	Course Learning Outcomes	<ul style="list-style-type: none"><li>• Making Software easily right out of the box.</li><li>• Experience with an interpreted Language.</li><li>• To build software for real needs.</li><li>• Prior Introduction to testing software</li></ul>
Module	Topics	No. of Hrs
1	<b>Introduction:</b> History of Python, Need of Python Programming, Python and PyCharm Installation, Running Python Scripts, Variables, Assignment, Keywords, Input-Output. Data Structures Lists– Operations, Slicing, Methods; Tuples, Sets; Dictionaries, Sequences.	6
2	<b>Types, Operators, and Expressions:</b> Types – Integers, Strings, Booleans; Operators- Arithmetic Operators, Comparison (Relational) Operators, Assignment Operators, Logical Operators, Bitwise Operators, Membership Operators, Identity Operators, Expressions and order of evaluations Control Flow- if, if-elif-else, for, while, break, continue, pass.	6
3	<b>Functions:</b> Defining Functions, Calling Functions, Passing Arguments, Keyword Arguments, Default Arguments, Variable-length arguments, Anonymous Functions, Fruitful Functions (Function Returning Values), Scope of the Variables in a Function- Global and	6

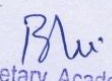


	Local Variables, Recursion, decorators. Modules: Creating modules, import statements, from. The import statement, namespacing, Python packages, Introduction to PIP, Installing Packages via PIP, Using Python Packages.				
4	<b>Built in Functions:</b> Files- read, write, open, close, readline, readlines, writelines, seek, tell etc. Date and Time, audio related function, lambda, F-string and string formatting, enumerate, If <code>__name__ == __main__</code> usage & necessity, join, map, filter, reduce, Built in Modules like Time, OS,.	6			
5	<b>Object:</b> Oriented Programming OOP in Python: Classes, 'self-variable', Methods, Constructor Method, Inheritance, Overriding Methods, Data hiding, and Overloading.	6			
Hands-on/Field work	Practical/Project	30			
Part C – Learning Resources					
Text books, Reference Books, Other Resources					
Part D- Assessment and Evaluation					
Title	CCE	Min. Marks	Term Exam	Min. Marks	Total
Theory	10	4	40	14	50
Practical/Project	--	--	50	17	50

  
 Coordinator, Board of Studies  
 Govt. Holkar (Model Autonomous)  
 Science College, Indore

  
 Chairperson, Board of Studies  
 Govt. Holkar (Model Autonomous)  
 Science College, Indore

**Approved**

  
 Member Secretary, Academic Council  
 Govt. Holkar (Model Autonomous)  
 Science College, Indore

## 8.4 Students List: -

**DEPARTMENT OF ELECTRONICS, GOVT. HOLKAR (MODEL,  
AOTOOUNOMOUS) SCIENCE COLLEGE, INDORE**  
**Certificate Course on Basic Programming with Python**

**Main Exame MAY-2022**

Date: 28/05/2022

S.No.	Roll No	NAME	Signature
1	22PY01	AASHUTOSH UPADHYAY	
2	22PY02	AAYUSH CHOUHAN	
3	22PY03	ABHISHEK PATIDAR	
4	22PY04	AKRATI PATLE	
5	22PY05	ALOK KUMAR	
6	22PY06	AMAN ASATI	
7	22PY07	AMAN SHRIVAS	
8	22PY08	ARPIT SINGH	
9	22PY09	ARUN KUMAR YADAV	
10	22PY10	AYUSH KUMAR SARATHE	
11	22PY11	CHANDRIKA MITTAL	
12	22PY12	CHITRANSHI SHARMA	
13	22PY13	DEEPIKA AGRAWAL	
14	22PY14	DEVENDRA BARMAN	
15	22PY15	DHILLOPAMA JADHAV	
16	22PY16	GARIMA LASHKARE	
17	22PY17	HAREESH KUMAR SINGH SOTIYA	
18	22PY18	HARSHA CHOUDHARY	
19	22PY19	Hritik Singh	
20	22PY20	KRIKTIKA SARVA	
21	22PY21	LAKSHITA HAJARE	
22	22PY22	MADHUSUDAN NAGAR	
23	22PY23	MAHENDRA MEWADA	
24	22PY24	MANISHA AHIRWAR	
25	22PY25	MANSEE GEHLOT	
26	22PY26	MANSI SONI	
27	22PY27	MINI RAJAK	
28	22PY28	MAHENDRA DHURVE	



S.No.	Roll No	NAME	Signature
29	22PY29	NEERAJ RATHORE	<i>Neeraj</i>
30	22PY30	NIKITA JAIN	<i>Nikita Jain</i>
31	22PY31	NILESH MANDOWAR	<i>Nilesh</i>
32	22PY32	NIRVAN NAIK	<i>(A)</i>
33	22PY33	PALAK BHARAMBE	<i>Palak</i>
34	22PY34	PRACHI GOLHANI	<i>Prachi</i>
35	22PY35	PRAMILA NAHAR	<i>PrAMILA</i>
36	22PY36	PRANSHU SINGH	<i>Pranshu</i>
37	22PY37	PRINCE	<i>Prince</i>
38	22PY38	PRIYA MEDA	<i>(A)</i>
39	22PY39	RAHUL RAWAT	<i>Rahul</i>
40	22PY40	RANJEETA DHAKAD	<i>Ranjeeta</i>
41	22PY41	RUPAL BARASKAR	<i>Rupal</i>
42	22PY42	SAGAR PATIDAR	<i>(A)</i>
43	22PY43	SAKSHI SURYAWANSHI	<i>Sakshi</i>
44	22PY44	SANDEEP PARMAR	<i>Sandeep</i>
45	22PY45	SANJAY AARYA	<i>Sanjay</i>
46	22PY46	SANJU SAHU	<i>Sanju</i>
47	22PY47	SARASWATI AHIRWAR	<i>Saraswati</i>
48	22PY48	SATYENDRA KUMAR VERMA	<i>Satyendra</i>
49	22PY49	SHIKHAR NIGAM	<i>Shikhar</i>
50	22PY50	SHRESHTHA SHRIVASTAVA	<i>(A)</i>
51	22PY51	SHREYASI GUPTA	<i>Shreyasi Gupta</i>
52	22PY52	SHUBHAM BARASKAR	<i>Shubham</i>
53	22PY53	SHUBHAM KHOBRADE	<i>Shubham</i>
54	22PY54	SNEHA LODHI	<i>Sneha...</i>
55	22PY55	TANISH BAROAD	<i>Tanish</i>
56	22PY56	TEENA SONI	<i>Teena</i>
57	22PY57	VAISHNAVI VYAS	<i>Vaishnavi</i>
58	22PY58	YOGITA CHOUDHARY	<i>Yogita</i>

Invigilator

(Dr.Netram Kaurav)  
HOD  
Department of Electronics

9.

Robotics



## 9.1 Brochure: -


Search results - Google | Download file | iLovePDF | Inbox (214) - iqac@... | Sent Mail - editorspe... | Elex.Certificate.Syllab... | Government Holkar | Calendar 2023 - Gov... | +

lms.holkar.org/course-view?name=Certificate-Course-on-Robotics-&id=MTU4MDQ=

Gmail | NAAC - Home | NIRF | Govt. Holkar Sc. Col... | AISHE | WhatsApp | उच्च शिक्षा विभाग, मध्...

0731-464074 | support@lms.holkar.org


Screen Reader Access | Login | Registration

 **Government Holkar (Model, Autonomous)  
Science College, Indore (M.P.), India**

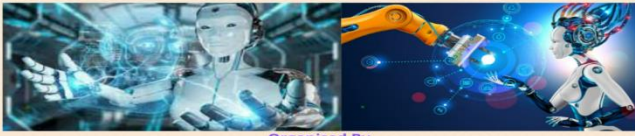
Call Now  
0731-464074

Send Message  
support@lms.holkar.org

HOME | ABOUT US | COURSES | CLASSES | WEBINARS / CONFERENCES | MY CITATION | SCANNER | CONTACT

 **Government Holkar (Model, Autonomous)  
Science College, Indore (M.P.), INDIA**

**Certificate Course on Robotics**



Organised By  
**Department of Electronics**

**Certificate Course on Robotics**

**Course Features**

Duration	165
Start Date	17/01/2022
End Date	30/06/2022
Reg. Start Date	04/01/2022
Reg. End Date	20/01/2022
Certificate	YES
Open Access	NO
Registration Link	<a href="#">Registration Link</a>

CODE : ELEX2103

[Start Course](#)

Robotics is the intersection of science, engineering and technology that produces machines, called robots, that substitute for (or replicate) human actions. In future, robots will be found performing tasks that

Gender Audit rep...docx | Gender Audit.docx | Ilovepdf\_pages-to-...zip | Python\_Syllabus\_...pdf | Ilovepdf\_pages-to-...zip | Gender Audit.docx | Show all

30°C  
Mostly sunny

Search

ENG  
IN

15:54  
31.03.2023

## **9.2 Permission: -**

इलेक्ट्रॉनिक्स विभाग, शासकीय (आदर्श, स्वशासी) होलकर विज्ञान माहविद्यालय, इन्दौर (म.प्र.)

क्रमांक.....

इन्दौर, दिनांक .....

प्रति,

प्राचार्य,

शासकीय होलकर विज्ञान महाविद्यालय,

इन्दौर (म.प्र.)

विषय : इलेक्ट्रॉनिक्स विभाग द्वारा सर्टिफिकेशन कोर्स करने बाबत प्रस्ताव।

महोदय,

इलेक्ट्रॉनिक्स विभाग द्वारा Robotics विषय पर 6 माह के सर्टिफिकेट कोर्स आयोजित करने का प्रस्ताव निम्नानुसार प्रस्तुत है -

1. कोर्स का नाम - Certification Course on Robotics
2. अवधि - 60:00 घंटे
3. कोर्स प्रारंभ करने की तिथि - 26 फरवरी 2022 से प्रारंभ
4. कोर्स के विषय पाठ्यक्रम - इलेक्ट्रॉनिक्स विषय के अध्ययन मण्डल (बोर्ड ऑफ स्टडी) द्वारा सर्टिफिकेट कोर्स हेतु अनुमोदित पाठ्यक्रम (सलग्न)
5. रिसर्स पर्सन (विषय विशेषज्ञों की जानकारी) इन्दौर शहर में Robotics के क्षेत्र में कार्यरत कम्पनी के इंजीनियरों को आमंत्रित किया जाएगा।
6. विषय विशेषज्ञों को मानदेय नियमानुसार राशि रु 1000 प्रति व्याख्यान (90 मिनट) के दर से देय होगा।
7. कोर्स के लिए अर्हता - कक्षा 12वीं एवं किसी भी विषय में बी.एस.सी. उत्तीर्ण या अध्ययनरत विद्यार्थी इस कोर्स के लिए अर्ह है।
8. कोर्स फीस एवं परीक्षा शुल्क - रु 1000 + 200/- प्रति अभ्यर्थी
9. संभावित प्रतिभागियों की संख्या - 20
10. फीस द्वारा प्राप्त होने वाली संभावित आय - रु 24,000/-
11. महाविद्यालय से प्राप्त Seed money - नहीं
12. कुल संभावित आय रु - 24,000/-
13. कुल आय रु - 24,000/-



14. विषय विशेषज्ञों के मानदेय पर संभावित कुल व्यय रू - 16,000/-
15. परीक्षा शुल्क - 4000/-
16. स्टेशनरी, कम्प्यूटर स्टेशनरी, फोटो कॉपी एवं अन्य स्टेशनरी आदि पर व्यय-1000/-
17. अन्य विविध व्यय एवं आकस्मिक व्यय - 3000/-
18. कुल संभावित व्यय रू. - 24,000/-

इस सर्टिफिकेट कोर्स के लिए नियमित कक्षाएँ प्रतिदिन प्रातः 9:00 से 12:00 तक इलेक्ट्रॉनिक्स विभाग में आयोजित की जावेंगी। इस कोर्स के लिए परीक्षा विभाग द्वारा परीक्षा आयोजित की जावेगी जिसके अन्तर्गत सैद्धांतिक एवं प्रयोगिक परीक्षा आयोजन होगा। सफल अभ्यर्थियों को सर्टिफिकेट प्रदान किए जावेगे।

कृपया इस कोर्स को आयोजित करने हेतु अनुमति विभाग को प्रदान करने का कष्ट करें।



डॉ. नेतराम कौरव  
विभागाध्यक्ष  
इलेक्ट्रॉनिक्स विभाग

संलग्न:-

1. आयुक्त उच्चशिक्षा द्वारा अनुमोदित सर्टिफिकेट कोर्स अनुमति पत्र
2. अध्ययन मण्डल के सदस्यों द्वारा अनुमोदित पाठ्यक्रम की प्रतिलिपी।

Yes  


### **9.3 Syllabus: -**

**Govt. Holkar (Model, Autonomous) Science College, Indore**  
**Department of Electronics**  
**Syllabus Session 2021-22**

Title of Certificate Course:	Robotics
Course Code	RX02
Credit	4

Part A : Introduction		
1	Certificate Course Description	Develop and implement an embedded system (hardware and software) necessary to control a typical robot Acquire and process data from typical sensors used in robotics Control typical actuators used in robotics.
2	Pre-requisite (if any)	10+2 with Science
3	Course Objective	This course is especially designed to bridge that gap by providing an opportunity to the students, so that they can write embedded C/C++ programs to interface different types of input/output devices with the Microcontroller to do different projects. Now robotics is an emerging field of technology. In many sectors in our industry, robots are replacing humans very rapidly. That is why in this course students will also get some insight of robotics.
4	Course Learning Outcomes	1. Understand the importance of embedded systems and robotics in our daily life. 2. Identify different embedded devices. 3. Identify different components of embedded systems and robotics. 4. Interfaced different input/output devices with a microcontroller. 5. Design mechanical structure of a robot.
Module	Topics	No. of Hrs
1	<b>Introduction:</b> Embedded system, components, advantages, application, Arduino and Its History, popularity, capabilities of arduino, real world applications Introduction to Arduino IDE, Familiarizing with Arduino Development Board, Understanding Arduino Sketch, Compile and Upload sketches in Arduino	6
2	<b>Arduino Programming Concepts:</b> Arduino data types, Variables and Constants, Operators, Control Statements If, If-else, nested if-else, Loop- while, for, break, continue, Functions, basic programming of arduino.	6
3	<b>Arduino Online Simulator:</b> Introduction of Arduino Online Simulator, Benefits of Online Simulator, operate Online Simulator, Integration and working of Online simulator with Arduino	6



	Development Board.	
4	<b>Input Interfacing:</b> Sensors: InfraRed, UltraSonic, Thermistor (LM35), LDR, Clap, Switch.	6
5	<b>Output Interfacing:</b> LED, LCD, Relay, Motors- DC, Stepper, Bluetooth.	6
Hands-on/Field work	Practical/Project	30

**Part C – Learning Resources**

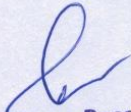
**Text books, Reference Books, Other Resources**


**Reference books:**

1. Arduino Robotics by John David Warren
2. Arduino Workshop: A Hands-On Introduction with 65 Projects, 1st Edition.
3. Arduino Programming: The Ultimate Guide For Making The Best Of Your Arduino Programming Projects, Kindle Edition


**Part D- Assessment and Evaluation**

Title	CCE	Min. Marks	Term Exam	Min. Marks	Total
Theory	10	4	40	14	50
Practical/Project	--	--	50	17	50

  
Coordinator, Board of Studies  
Govt. Holkar (Model Autonomous)  
Science College, Indore

  
Chairperson, Board of Studies  
Govt. Holkar (Model Autonomous)  
Science College, Indore

**Approved**

  
Member Secretary, Academic Council  
Govt. Holkar (Model Autonomous)  
Science College, Indore

## 9.4 Students List: -

DEPARTMENT OF ELECTRONICS, GOVT. HOLKAR (MODEL,  
AOTOUNOMOUS) SCIENCE COLLEGE, INDORE  
Certificate Course on Robotics

Main Exame MAY-2022

30/5/22

S.No.	Roll No.	NAME	Signature
-1	22RX01	ANIKET SAHU	Aniket
-2	22RX02	ATANU PAL	Ap
-3	22RX03	DEEPANSHU BHISIKAR	Deepanshu
4	22RX04	HAREESH KUMAR SINGH SOTIYA	Hareesh
5	22RX05	JAINY SONI	Jainy
6	22RX06	KULDEEP PANCHAL	Kuldeep
7	22RX07	NARENDRA DHURVE	Narendra
8	22RX08	NILESH PATIL	Nilesh
9	22RX09	<del>NIRAV KHOBRAHADE</del> NIRAV KHOBRAHADE	<del>Nirav</del> Absent
-10	22RX10	NITIN HATHIYA	Absent
-11	22RX11	PRAVEEN SINGH PARMAR	Praveen
12	22RX12	PRINCE	Prince
-13	22RX13	RAJ PATEL	Raj
-14	22RX14	RAJIT TOMAR	Rajit
15	22RX15	TANISHQ JOSHI	Tanishq

(Dr.Netram Kaurav)  
HOD  
Department of Electronics



10.

Fabrication and  
Maintenance of  
Laboratory Equipment

## 10.1 Brochure: -


Government Holkar (Model, Aut.) x

lms.holkar.org/course-view/name=Certificate-Course-on-Fabrication-and-Maintenance-of-Laboratory-Equipment&id=MTMxNzA=

Gmail NAAC - Home NIRF Govt. Holkar Sc. Col... AISHE WhatsApp उच्च शिक्षा विभाग, मध्...


0731-464074 support@lms.holkar.org

Screen Reader Access Login Registration


 **Government Holkar (Model, Autonomous)  
Science College, Indore (M.P.), India**

Call Now 0731-464074 Send Message support@lms.holkar.org

HOME ABOUT US COURSES CLASSES WEBINARS / CONFERENCES MY CITATION SCANNER CONTACT

 **Government Holkar (Model, Autonomous)  
Science College, Indore (M.P.), INDIA**

**Certificate Course on Fabrication and Maintenance of Laboratory Equipment**



**Organised By**

**Department of Electronics**

**Course Features**

Duration	165
Start Date	17/01/2022
End Date	30/06/2022
Reg. Start Date	04/01/2022
Reg. End Date	20/01/2022
Certificate	YES
Open Access	NO
Registration Link	<a href="#">Registration Link</a>

**Certificate Course on Fabrication and Maintenance of Laboratory Equipment** CODE : ELEX2101 [Start Course](#)

Fabrication and maintenance of laboratory equipment is one the most emerging field of equipment industry and laboratory education. If you want to develop your own electronic product, then you're going to need a way to test, program, and debug the electronics. In this course you will learn some hands on tools in order to be able to test, create, design and analyze electronics circuits. This course is surely going to enhance your skills in hardware field.

22°C Partly cloudy Search ENG IN 23:56 01-04-2023



## 10.2 Permission: -

इलेक्ट्रॉनिक्स विभाग, शासकीय (आदर्श, स्वशासी) होलकर विज्ञान महाविद्यालय, इन्दौर (म.प्र.)  
क्रमांक..... इन्दौर, दिनांक .....

प्रति,

प्राचार्य,

शासकीय होलकर विज्ञान महाविद्यालय,

इन्दौर (म.प्र.)

विषय : इलेक्ट्रॉनिक्स विभाग द्वारा सर्टिफिकेशन कोर्स करने बाबत प्रस्ताव।  
महोदय,


इलेक्ट्रॉनिक्स विभाग द्वारा Fabrication and Maintenance of Laboratory Equipment विषय पर 6 माह के सर्टिफिकेट कोर्स आयोजित करने का प्रस्ताव निम्नानुसार प्रस्तुत है -

1. कोर्स का नाम - Certificate Course on Fabrication and Maintenance of Laboratory Equipment
2. अवधि - 60:00 घंटे
3. कोर्स प्रारंभ करने की तिथि - 26 फरवरी 2022 से प्रारंभ
4. कोर्स के विषय पाठ्यक्रम - इलेक्ट्रॉनिक्स विषय के अध्ययन मण्डल (बोर्ड ऑफ स्टडी) द्वारा सर्टिफिकेट कोर्स हेतु अनुमोदित पाठ्यक्रम (सलग्न)
5. रिसर्चर्स पर्सन (विषय विशेषज्ञों की जानकारी) इन्दौर शहर में Fabrication and Maintenance of Laboratory Equipment के क्षेत्र में कार्यरत कम्पनी के इंजीनियरों को आमंत्रित किया जाएगा।
6. विषय विशेषज्ञों को मानदेय नियमानुसार राशि रु 1000 प्रति व्याख्यान (90 मिनट) के दर से देय होगा। स्थानीय विशेषज्ञों को 200 रु वाहन भत्ता प्रदान किया जावेगा। इन्दौर से बाहर के विशेषज्ञों को एसी थर्ड श्रेणी का किराया एवं मध्यप्रदेश शासन के नियमानुसार डीए देय होगा।
7. कोर्स के लिए अर्हता - कक्षा 12वीं एवं किसी भी विषय में बी.एस.सी. उत्तीर्ण या अध्ययनरत विद्यार्थी इस कोर्स के लिए अर्ह है।
8. कोर्स फीस एवं परीक्षा शुल्क - रु 1000 + 200/- प्रति अभ्यर्थी

9. संभावित प्रतिभागियों की संख्या - 20
10. फीस द्वारा प्राप्त होने वाली संभावित आय - रु 24,000/-
11. महाविद्यालय से प्राप्त Seed money - नहीं
12. कुल संभावित आय रु - 24,000/-
13. कुल आय रु - 24,000/-
14. विषय विशेषज्ञों के मानदेय, पर संभावित कुल व्यय रु - 16,000/-
15. परीक्षा शुल्क - 4000/-
16. स्टेशनरी, कम्प्यूटर स्टेशनरी, फोटो कॉपी एवं अन्य स्टेशनरी आदि पर व्यय-1000/-
17. अन्य विविध व्यय एवं आकस्मिक व्यय - 3000/-
18. कुल संभावित व्यय रु. - 24,000/-

इस सर्टिफिकेट कोर्स के लिए नियमित कक्षाएँ प्रतिदिन प्रातः 11:30 से 2:30PM तक इलेक्ट्रॉनिक्स विभाग में आयोजित की जाएंगी। इस कोर्स के लिए परीक्षा विभाग द्वारा परीक्षा आयोजित की जावेगी जिसके अन्तर्गत सैद्धांतिक एवं प्रयोगिक परीक्षा आयोजन होगा। सफल अभ्यर्थियों को सर्टिफिकेट प्रदान किए जावेगे।

कृप्या इस कोर्स को आयोजित करने हेतु अनुमति विभाग को प्रदान करने का कष्ट करें।



डॉ. नेतराम कौरव  
विभागाध्यक्ष  
इलेक्ट्रॉनिक्स विभाग

संलग्न:-

1. आयुक्त उच्चशिक्षा द्वारा अनुमोदित सर्टिफिकेट कोर्स अनुमति पत्र
2. अध्ययन मण्डल के सदस्यों द्वारा अनुमोदित पाठ्यक्रम की प्रतिलिपी।

Yes  
Dep



### 10.3 Syllabus: -

**Govt. Holkar (Model, Autonomous) Science College, Indore**  
**Department of Electronics**  
**Syllabus Session 2021-22**

Title of Certificate Course:	Fabrication and Maintenance of Laboratory Equipment
Course Code	FMLE
Credit	4

Part A : Introduction		
1	Certificate Course Description	The Objectives of providing services and training in electronic product design, testing & repairs. Electronic instrument repair and maintenance.
2	Pre-requisite (if any)	10+2 with Science
3	Course Objective	Student will learn how to maintain and fabricate the electronic Devices for Industrial and Academics purpose and enhance the practical knowledge of various electronic Instruments.
4	Course Learning Outcomes	<ul style="list-style-type: none"><li>• To study the steady state behavior and transient behaviour of various circuits.</li><li>• To gain practical knowledge about soldering and its various techniques.</li><li>• To study reasons for failures in various components , techniques for failure detection and troubleshooting.</li><li>• To introduce students to the use of various electronic/electrical instruments their construction, applications, principles of operation.</li><li>• To gain knowledge about the various types of semiconductor diodes.</li></ul>
Module	Topics	No. of Hrs
1	<b>Methods of Soldering:</b> Introduction of soldering process, Classification of soldering techniques, Different soldering techniques: Soft Soldering, Hard Soldering: Silver and Braze soldering, Required tools for Soldering: soldering iron, soldering flux, soldering paste, soldering Steps, Soldering tips.	06
2	<b>PCB Designing:</b> Layout of PCB, PCB Packages, Track, Pads, Vias, Polygons on PCB, Component placement and design, Etching, Drilling, Soldering, Component mounting. <b>Designing of Various Circuits:</b> PCB designing Practice: PCB designing of Basic and Analog Electronic circuits, PCB design of power supplies, Testing and Troubleshooting of various Electronic circuits.	06
3	<b>Maintenance Management and Troubleshooting:</b> Objectives of Maintenance Management, service and maintenance laboratory, Maintenance policy: Concept of Warranty and Guarantee, equipment service option, Troubleshooting process, Fault finding tools and	06



	instruments, Troubleshooting techniques and measures, Software installation Procedures and policies.	
4	<b>Measuring Instruments:</b> Measuring methods in series and parallel connections, DC Voltmeter and AC Voltmeter, Digital Voltmeter. <b>Multimeters:</b> Analog Multimeter: resistance, voltage and current measurement. Digital multimeter: voltage, current and resistance measurement. Calibration of analog and digital multimeters.	06
5	<b>Fabrication and Maintenance of Semiconductor Kits:</b> Zener Diode, PN Junction Diode, Field Effect Transistor (FET), Silicon Controlled Rectifier (SCR), Solar Cell, Light Emitting Diode (LED), Bipolar Junction Transistor (BJT), Digital IC Trainer, Charging Discharging of Capacitor,	06
Hands-on/Field work	Practical/Project	30

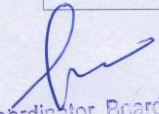
#### Part C – Learning Resources

##### Text books, Reference Books, Other Resources

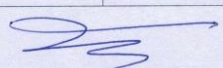
1. Malvino Albert & Bates David J, "Electronic Principles", TMH Publication, 7<sup>th</sup> Edition, July 2017.
2. Boylested Robert L. & Nashelsky Louis, "Electronics Devices and Circuits", Pearson Pub. January 2015, 11<sup>th</sup> edition.
3. Mehta V.K. & Mehta Rohit, "Principles of Electronics", S. Chand, February 2014, 12<sup>th</sup> Edition.
4. Thareja B.L, "Basic Electronics Solid State", S. Chand, December 2006.
5. Sedha R.S. "A text book of Electronics Devices and Circuits", S. Chand, Revised Edition, December 2010.
6. <https://www.nielit.gov.in/Aurangabad.content.certificate-course-printed-circuit-board-design-analysis-and-manufacturing-technique>

#### Part D- Assessment and Evaluation

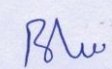
Title	CCE	Min. Marks	Term Exam	Min. Marks	Total
Theory	10	4	40	14	50
Practical/Project	--	--	50	17	50

  
Coordinator, Board of Studies  
Govt. Holkar (Model Autonomous)  
Science College, Indore

**Approved**

  
Chairperson, Board of Studies  
Govt. Holkar (Model Autonomous)  
Science College, Indore

SESSION 2021 - 22

  
Member Secretary, Academic Council  
Govt. Holkar (Model Autonomous)  
Science College, Indore



#### 10.4 Students List: -

DEPARTMENT OF ELECTRONICS, GOVT. HOLKAR (MODEL,  
AUTONOMOUS) SCIENCE COLLEGE, INDORE  
Certificate Course on Fabrication and Maintenance of Laboratory  
Equipment

Main Exame MAY-2022

30/5/22

S.No.	Roll No.	NAME	Signature
5	22LE01	ALOK KUMAR PATEL	
3	22LE02	DAMINI PANCHAL	<i>damini</i>
1	22LE03	KASHISH	<i>kashish</i>
6	22LE04	MANOHAR SINGH PANWAR	
2	22LE05	NEELISHA RATHORE	<i>Neelisha</i>
7	22LE06	NIRVAN NAIK	
4	22LE07	VIKAS PRAJAPAT	<i>Vikas</i>
8	22LE08	YASH SUNERIYA	<i>yash</i>

(Dr. Netram Kaurav)  
HOD  
Department of Electronics