



Shri Shivaji Education Society, Amravati's

SHRI SHIVAJI SCIENCE & ARTS COLLEGE

CHIKHLI DIST. BULDANA (M.S.)

NAAC Reaccredited with 'B++' Grade (CGPA3.00)

ISO 9001:2015



Department of Zoology

Organized
Certificate Course on Apiculture

From
15/11/2025 to 15/02/2026



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Action Taken Report of Certificate Course on Apiculture, organized by Department of Zoology, Shri Shivaji Science And Arts College Chikhli



The brochure features a header with four logos: Mahatma Gandhi, Shri Shivaji Education Society, PM-USHA, and a portrait of a woman. Below this, the text reads: **Shri Shivaji Education Society, Amravati's**, **SHRI SHIVAJI SCIENCE & ARTS COLLEGE**, **CHIKHLI DIST. BULDANA (M.S.)**, and **NAAC Reaccredited with 'B++' Grade (CGPA 3.00) ISO 9001:2015**. The main content area includes a photo of a bee, the text **Department of Zoology Certificate Course ON Apiculture**, a **Duration 3 Months** box, and a pink circle stating **Admission Open**. Below this, two purple boxes indicate the course is **From: 15/11/2025 to 15/02/2026** and is **Sponsored by PM-USHA**. The bottom section lists the **Course Coordinator Dr. R. B. Gade**, **HOD Dr. V. M. Hemke**, and **Principal Dr. P. R. Padole**.

Brochure



Shri Shivaji Education Society, Amravati's
SHRI SHIVAJI SCIENCE & ARTS COLLEGE
CHIKHLI DIST. BULDANA (M.S.)
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Department of Zoology

Date: October 25, 2025

NOTICE

Subject: Admissions Open for Certificate Course on Apiculture (Beekeeping)

All students are hereby informed that the **Department of Zoology** is starting a 3-month **Certificate Course on Apiculture**, sponsored by **PM-USHA**.

This course is designed to provide practical skills in beekeeping, honey production, and colony management, which can open doors to entrepreneurship and environmental conservation careers.

Course Details:

- **Course Title:** Certificate Course on Apiculture
- **Duration:** 3 Months
- **Course Period:** 15th November 2025 to 15th February 2026
- **Sponsorship:** PM-USHA (Pradhan Mantri Uchchatar Shiksha Abhiyan)
- **Eligibility:** Open to all interested students (Priority to Zoology students)

Why Join This Course?

- Gain hands-on experience in beekeeping.
- Learn about honey and wax processing.
- Enhance your career prospects in agriculture and skill-based industries.

How to Apply:

Interested students should collect the registration forms from the Department of Zoology and submit them to the Course Coordinator on or before **November 10, 2025**. Admissions are on a first-come, first-served basis as seats are limited.

For further inquiries, please contact:

Dr. R. B. Gade
(Course Coordinator)

Dr. R. B. Gade
Course Coordinator

Dr. V. M. Hemke
Head
Department of Zoology
HEAD
Department of Zoology
Shri Shivaji Sci. & Arts College
Chikhli Dist. Buldana 443201

Dr. V. U. Pochhi
Principal
Shri Shivaji Science And Arts College
PRINCIPAL
Shri Shivaji Science & Arts
College, Chikhli, Dist. Buldana

Notice



Shri Shivaji Education Society, Amravati's
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Department of Zoology

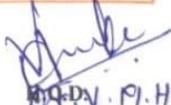
**CERTIFICATE COURSE
ON
APICULTURE**

Duration
15/11/2025 to 15/02/2026

Time Table

Sr.No.	Day	Name of Teacher	Theory/Practical	Time
3	Wednesday	Mis. S. L. Nalinde	Theory	8:30 to 9:30PM
2	Tuesday	Dr. R. B. Gade	Theory	8:30 to 9:30PM
1	Monday	Dr. V. M. Hemke	Practical	8:30 to 9:30PM
4	Thursday	Mr. S. S. Shaikh	Theory	8:30 to 9:30PM
5	Friday	Dr. V. M. Hemke	Theory	8:30 to 9:30PM
6	Saturday	Dr. R. B. Gade	Practical	8:30 to 9:30PM


Course Coordinator


Dr. V. M. Hemke
Department of Zoology
HEAD
Department of Zoology,
Shri Shivaji Sci. & Arts College
Chikhli Dist. Buldana 443201

Time Table



Shri Shivaji Education Society, Amravati's
SHRI SHIVAJI SCIENCE & ARTS COLLEGE

CHIKHLI DIST. BULDANA (M.S.)
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Department of Zoology

**CERTIFICATE COURSE
ON
APICULTURE**

Duration
15/11/2025 to 15/02/2026

Theory Syllabus

Unit	Title of the Unit
Unit 1	Introduction to Apiculture - scope, importance <ul style="list-style-type: none">➤ History of bee keeping: Definition, Bee keeping in worldwide, In India. Traditional bee keeping, Modern beekeeping, Urban or backyard beekeeping.➤ Apiculture development in India - institutions involved. Role of Central Honey Bee Research & Training Institute.
Unit 2	Honey Bee morphology, Life cycle and Honeybee Enemies <ul style="list-style-type: none">➤ Basic concepts of morphology of Honey bees - indigenous, exotic➤ Honey bee species and identification. Origin, systematic and distribution of honey bees. Types of honey bees, Species of honey bees. Bee identification.➤ Social organization in honey bees: Colony life and social organization - Queen, drone, worker. Annual biological cycle of the bee colony.➤ Bee enemies and diseases: An introduction, Bee enemies - Wax Moth, Ants, Wasps, Microorganisms, Pests. Diagnosis and Identification.➤ Mites attacking honey bees: Varroa mites, Mite Biology, Controlling Varroa Mites, Mechanical control, Mite-tolerant stocks, Biopesticides, Chemical

	(synthetic pesticide) treatments.
Unit 3	<p style="text-align: center;">Honey - its properties and application in various fields</p> <ul style="list-style-type: none"> ➤ Honey - its medicinal properties - application in various fields - other valuable by products of honey bees ➤ Value added honey products. Properties of honey products, Nutrients and composition of honey, Acid content and flavor effects. ➤ Types of value added honey products.
Unit 4	<p style="text-align: center;">Bee keeping: Tools and Equipment.</p> <ul style="list-style-type: none"> ➤ Basic requirements of Tools for starting bee keeping: Getting Started in Beekeeping - Land and Buildings, Equipment and supplies. ➤ Bee keeping equipment - introduction to types of bee boxes - BIS standard Tools used in apiculture. ➤ Bee breeding multiplication of colonies - Queen reaching technique.
Unit 5	<p style="text-align: center;">Honeybee Plants and Floral Calendar.</p> <ul style="list-style-type: none"> ➤ Bee flora - importance propagation - congenial conditions for starting up of apiculture. ➤ Migratory Bee Keeping - designing floral Calendar ➤ Improved Agricultural practices - crop pollination - Pesticides impact on Honey bees.
Unit 6	<p style="text-align: center;">Honey Processing and Bee Hive Products</p> <ul style="list-style-type: none"> ➤ Honey extraction & handling - Quality control standards - Honey testing kit ➤ Processing of honey. Other valuable by products of honey bees ➤ Bee venom & Royal jelly extraction.

Reference Books for Theory

- ✓ Prospective in Indian Apiculture - R.C. Mishra.
- ✓ Rearing queen bees in India - M.C. Suryanarayana et. al.
- ✓ Bee Keeping in India - G. K. Ghosh.
- ✓ Technology and value addition of Honey - Dr. D. M. Wakhle and K. D. Kamble.
- ✓ ABC & XYZ of Bee culture - A. I. Root.
- ✓ Indian Bee Journal - All India Bee Keeping Association.
- ✓ Asian Bee Journal.

Practical Syllabus

Sr. No.	Title of the Practical
1	➤ To study the morphology of Honeybees and Identification of different species and classes of Honey bees.
2	➤ To Study different stages in life cycle of Honey bees.
3	➤ To study the behavior of Honeybees.
4	➤ Bee keeping unit - Handling of frames with colonies.
5	➤ Introduction of parts of Bee box - ISI 'A' type 'B' type & Tools used in Bee keeping.
6	➤ Identification of Queen Cells, Drone cells & Brood.
7	➤ Sugar feeding of colonies in scarcity period.
8	➤ Identification of kinds of Queen Cells.
9	➤ Methods of Multiplication of Bee Colonies.
10	➤ Bee flora - Propagation of bee plants - Preparation of floral calendar.
11	➤ Natural enemies and predators of Honey Bees - management involved.


Course Coordinator

Reference for Practical:

- ✓ David Cramp, 2012. The Complete Step-by-step Book of Beekeeping: A Practical Guide to Beekeeping, from Setting up a Colony to Hive Management and Harvesting the Honey. Lorenz Books. London.
- ✓ David Cramp, 2009. A Practical Manual of Beekeeping: How to Keep Bees and Develop Your Full Potential as an Apiarist. Spring Hill, London.
- ✓ Ted Hooper, 2010. Guide to Bees and Honey: The World's Best Selling Guide to Beekeeping. Northern Bee Books. Oxford.
- ✓ David Cramp, 2012. The Complete Step-by-step Book of Beekeeping: A Practical Guide to Beekeeping, from Setting up a Colony to Hive Management and Harvesting the Honey. Lorenz Books. London.
- ✓ Vijay Kumar Kaushik Bee keeping in India a profitable enterprise.


Dr. V. M. Hemke
H.O.D.

Department of Zoology

HEAD

Department of Zoology,
Shri Shivaji Sci. & Arts College
Chikhli, Dist. Buldana 443201

Theory & Practical Syllabus



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SHRI SHIVAJI SCIENCE & ARTS COLLEGE

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Department of Zoology

**Certificate Course
ON
Apiculture**

Duration

15/11/2025 TO 15/02/2026

List of Admitted Students

Sr.No.	Name of the students	Class
1	Arti Raju Ingle	B.Sc. -III
2	Srushti Ganesh Kale	B.Sc. -III
3	Komal Kishor Padghan	B.Sc. -III
4	Nikita Bhujangrao Nikhate	B.Sc. -III
5	Pranjali Digambar Dhokane	B.Sc. -III
6	Saheli Santosh Gondhane	B.Sc. -III
7	Dipti Arvind Jadhao	B.Sc. -III
8	Kiran Mungashiram Sathe	B.Sc. -III
9	Komal Eknath Wagh	B.Sc. -III
10	Komal Sunil Sathe	B.Sc. -III
11	Nutan Vitthal Patil	B.Sc. -III
12	Roshani Rameshwar Waghmare	B.Sc. -III
13	Sakshi Dnyaneshwar Wagh	B.Sc. -III

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14	Sakshi Siddheshwar Kathale	B.Sc. -III
15	Sakshi Vishnu Jadhav	B.Sc. -III
16	Sanskriti Santosh Kulthe	B.Sc. -III
17	Shyam Vijay Gund	B.Sc. -III
18	Vaishnavi Anil Shelke	B.Sc. -III
19	Gayatri Rajendra Joshi	B.Sc. -III
20	Gayatri Rameshwar Saste	B.Sc. -III
21	Mahek Parveen Alim Khan	B.Sc. -III
22	Vaishnavi Shivshankar Hade	B.Sc. -III
23	Dnyaneshwari Vishnu Bhawar	B.Sc. -III
24	Pranali Pradeep Mule	B.Sc. -III
25	Rahul Vijay Gawai	B.Sc. -III
26	Komal Shivanarayan Deshmane	B.Sc. -III
27	Nikita Gopal Molvande	B.Sc. -III
28	Pooja Datta Mukhmale	B.Sc. -III
29	Shivani Sopan Panalkar	B.Sc. -III
30	Vaishnavi Vithoba Ghube	B.Sc. -III
31	Vidya Narendra Paturkar	B.Sc. -III
32	Bharti Dnyaneshwar Sapkal	B.Sc. -III
33	Rohini Gajanan Parihar	B.Sc. -III
34	Vishal Subhash Raut	B.Sc. -III
35	Ritikesh Maroti Ghorpade	B.Sc. -III
36	Sagar Gajanan Ingle	B.Sc. -III
37	Ishwar Vijay Kankhar	B.Sc. -III
38	Vaibhav Sudam Ugale	B.Sc. -III
39	Jayshree Prakash Bhutekar	B.Sc. -III
40	Sagar Sheshrao Suradkar	B.Sc. -III
41	Vaishnavi Vishnu Shete	B.Sc. -III
42	Swaraj Ramdas Jadhav	B.Sc. -III
43	Ankita Dnyaneshwar Sapkal	B.Sc. -III
44	Santoshi Dilip Gadekar	B.Sc. -III


Dr. R. B. Gade
Course Coordinator


Dr. V. M. Hemke
H.O.D.
Department of Zoology
HEAD
Department of Zoology
Shri Shivaji Sci. & Arts College
Chikhli Dist. Buldana 443201

List of Admitted Students



Shri Shivaji Education Society, Amravati's
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CHIKHLI DIST. BULDANA (M.S.)
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Department of Zoology

REGISTRATION FORM Certificate Course on Apiculture (2025-2026) (Sponsored by PM-USHA)

Course Duration: 3 Months (15/11/2025 to 15/02/2026)
Registration No: _____ (For Office Use)

1. PERSONAL INFORMATION

- Full Name: KALE SRUSHTI GANESH
(In Block Letters: Surname - First Name - Middle Name)
- Date of Birth: 8/12/2004 Gender: Male [] Female [] Other []
- Category: SC [] ST [] OBC [] VJ/NT [] Open []
- Aadhar Card No: 794002630597 Blood Group: A⁺

2. CONTACT DETAILS

- Mobile Number: 8793166890 WhatsApp No: 8793166890
- Email ID: srushtikale509@gmail.com
- Permanent Address: A+ post Satgaon Bhusari Tq. Chikhli
- City: Chikhli Pin code: 443201 Dist. Buldhana.

3. ACADEMIC DETAILS

- Current Class / Year: B.Sc-IIIrd, 2025-2026
- College ID / Roll No: 23AB116828
- Previous Qualification (if external): B.Sc- IInd year.

4. UNDERTAKING & DECLARATION

I, Srushti gameesh Kale, hereby declare that the information provided above is true to the best of my knowledge. I agree to abide by the rules and regulations of the Department of Zoology and maintain the required attendance (min. 75%) to qualify for the certificate. I am aware that this course is sponsored by PM-USHA and I will participate in all practical sessions and field visits diligently.

Date: 7/11/2025
Place: Chikhli

Signature of Applicant: Skulte

FOR OFFICE USE ONLY

- Admission Status: Confirmed / Pending
- Date of Admission: 7-11-2025
- Documents Submitted: Photo Mark sheet Andhar Copy


Dr. R. B. Gade
(Course Coordinator)


Dr. V. M. Hemke
(HOD)
HEAD
Department of Zoology,
Shri Shivaji Science and Arts College
Chikhli Dist. Bidana 443201

Registration Form

Action Taken Report

ACTION TAKEN REPORT (ATR)

Institution: Shri Shivaji Science & Arts College, Chikhli

Department: Department of Zoology

Course Title: Certificate Course on Apiculture (Beekeeping)

Sponsorship: PM-USHA (Pradhan Mantri Uchchatar Shiksha Abhiyan)

Completion Date: February 15, 2026

Introduction

In alignment with the goal of fostering entrepreneurship and environmental conservation, the Department of Zoology initiated a three-month certificate course. The primary objective was to provide students with hands-on experience in beekeeping, honey production, and colony management.

Detailed Action Table

Sr No.	Initiative / Decision	Action Taken	Date of Completion
01	Course Conceptualization & Approval	Developed the 3-month curriculum focusing on honey/wax processing and secured sponsorship/funding under the PM-USHA scheme.	Oct 20, 2025
02	Official Notification	Issued a formal notice to students regarding admissions, course details, and career benefits to ensure maximum participation.	Oct 25, 2025
03	Student Enrollment & Selection	Conducted the registration process. Priority was given to Zoology students. Verified forms and finalized the list of candidates on a first-come, first-served basis.	Nov 10, 2025
04	Course Commencement	Formal inauguration and start of theoretical and practical sessions as per the scheduled timeline.	Nov 15, 2025

Action Taken Report of Certificate Course on Apiculture, organized by Department of Zoology, Shri Shivaji Science And Arts College Chikhli

05	Practical Training & Skill Building	Organized hands-on workshops on colony management and honey extraction. Students were trained in modern apiculture techniques.	Jan 20, 2026
06	Final Assessment & Evaluation	Conducted final examinations/practical assessments to evaluate student proficiency in beekeeping and wax processing.	Feb 10, 2026
07	Course Conclusion & Certification	Successfully completed the 3-month duration. Prepared certificates for students who met the attendance and performance criteria.	Feb 15, 2026

Key Outcomes

- **Skill Development:** Students gained specialized knowledge in the lifecycle of bees, hive maintenance, and the commercial aspects of honey production.
- **Entrepreneurship Readiness:** The course successfully identified and encouraged students interested in start-ups within the agriculture and skill-based sectors.
- **Resource Utilization:** Efficiently utilized the PM-USHA sponsorship to provide quality educational resources and practical kits to the participants.

Final Status

The Certificate Course on Apiculture (Beekeeping) stands **Successfully Completed** as of February 15, 2026. All administrative and academic requirements have been met.


Dr. R. B. Gade
Course Coordinator


Dr. V. M. Hemke
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Department of Zoology,
Shri Shivaji Sci. & Arts College
Chikhli Dist. Buldana 443201


Dr. V. U. Pochhi
IQAC Coordinator

Coordinator
IQAC, Shri Shivaji Sci. & Arts
College, Chikhli Dist. Buldhana


Dr. P. R. Padole
Principal
PRINCIPAL
Shri Shivaji Science & Arts
College, Chikhli, Dist. Buldhana

Name :- Arati Raju Ingle



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Shri Shivaji Education Society, Amravati's

SHRI SHIVAJI SCIENCE & ARTS COLLEGE

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Department of Zoology

Question paper On Apiculture

Time: 1:00 hr	Date: 10/02/2026	Total Marks: 40
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- Note: 1. All Questions are Compulsory.
2. Each Question carries 2 Marks

1. Which institute is primarily responsible for research and training in apiculture in India?
A) National Dairy Research Institute
 B) Central Honey Bee Research & Training Institute
C) Indian Council of Agricultural Research
D) Council of Scientific and Industrial Research
2. What is the practice of keeping bees in urban areas or small gardens known as?
A) Migratory Beekeeping
 B) Backyard Beekeeping
C) Traditional Beekeeping
D) Industrial Apiculture
3. Which of the following is an "exotic" species of honey bee commonly used in India?
A) *Apis cerana* B) *Apis dorsata* C) *Apis Mellifera* D) *Apis florea*
4. In a honey bee colony, the fertile male is known as the:
A) Worker B) Drone C) Queen D) Soldier
5. Which pest is considered a major "Bee Enemy" that destroys the combs by tunneling through them?
A) Varroa Mite B) Wax Moth C) Ant D) Wasp
6. Varroa mites are parasites that primarily attack honey bees. What is a "mechanical control" method for them?
A) Synthetic pesticide treatment B) Biopesticides
C) Using mite-tolerant stocks D) Drone brood removal
7. Which component makes up the largest percentage of honey composition besides water?
A) Proteins B) Minerals C) Sugars (Fructose/Glucose) D) Vitamins

8. Honey is widely used in medicine primarily because of its:

- A) High fat content
B) Antibacterial and antioxidant properties
C) Acidic flavor
D) High fiber content

9. "Value-added honey products" refers to:

- A) Pure raw honey
B) Products like honey-spreads, ginger-honey, or honey-cosmetics
C) Unfiltered beeswax
D) Wild honey collection

10. Which organization sets the standards for bee boxes and tools used in apiculture in India?

- A) ISO
B) BIS (Bureau of Indian Standards)
C) WHO
D) Ministry of Agriculture

11. What is the primary purpose of "Queen Rearing" techniques?

- A) To produce more honey
B) To multiply colonies and replace old queens
C) To kill drones
D) To prevent wax moth infestation

12. The availability of nectar and pollen-bearing plants in a specific area throughout the year is recorded in a:

- A) Floral Calendar
B) Bee Diary
C) Migration Map
D) Botanical Survey

13. Moving bee colonies to different locations to follow the bloom of crops is called:

- A) Stationary beekeeping
B) Urban beekeeping
C) Migratory beekeeping
D) Traditional beekeeping

14. What is the impact of excessive pesticide use on honey bees?

- A) Increase in honey production
B) Improved bee health
C) High mortality and colony collapse
D) Faster queen rearing

15. Which tool is used to remove honey from the combs without destroying the wax?

- A) Smoker
B) Honey Extractor (Centrifuge)
C) Bee Veil
D) Hive Tool

16. "Royal Jelly" is a secretion produced by:

- A) Drone bees
B) Queen bees
C) Worker bees (Nurse Bees)
D) Flowers

17. Bee venom is often extracted for its use in treating which condition?

- A) Diabetes
B) Rheumatoid Arthritis
C) Night blindness
D) Scurvy

18. Which of these is a "By-product" of apiculture?

- A) Propolis
B) Bee Wax
C) Royal Jelly
D) All of the above

19. To test the purity of honey at a field level, what can be used?

- A) Microscope
B) Honey testing kit
C) Thermometer
D) Barometer

20. Which caste of bee is responsible for all the work in the hive, including cleaning and foraging?

- A) Queen
B) Drone
C) Worker
D) King


Dr. R. B. Gade
Course Coordinator

Question paper



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Department of Zoology

**Certificate Course
ON
Apiculture**

Duration

15/11/2025 to 15/02/2026

Attendance of Students

Weekly Attendance

15/11/2025 to 22/11/2025

Sr.No.	Name of the students	Sign	Sign	Sign	Sign	Sign	Sign
1	Arti Raju Ingle	<i>Arti Ingle</i>					
2	Srushti Ganesh Kale	<i>Srushti Kale</i>					
3	Komal Kishor Padghan	<i>Komal Padghan</i>					
4	Nikita Bhujangrao Nikhate	<i>Nikita Nikhate</i>					
5	Pranjali Digambar Dhokane	<i>Pranjali Dhokane</i>					
6	Saheli Santosh Gondhane	<i>Saheli Gondhane</i>					
7	Dipti Arvind Jadhao	<i>Dipti Jadhao</i>					
8	Kiran Mungashiram Sathre	<i>Kiran Sathre</i>					

Action Taken Report of Certificate Course on Apiculture, organized by Department of Zoology, Shri Shivaji Science And Arts College Chikhli

9	Komal Eknath Wagh	K.E.Wagh	K.E.Wagh	K.E.Wagh	K.E.Wagh	K.E.Wagh	K.E.Wagh
10	Komal Sunil Sathe	KSathe	KSathe	KSathe	KSathe	KSathe	KSathe
11	Nutan Vitthal Patil	Patil	Patil	Patil	Patil	Patil	Patil
12	Roshani Rameshwar Waghmare	R.W.	R.W.	R.W.	R.W.	R.W.	R.W.
13	Sakshi Dnyaneshwar Wagh	SWagh	SWagh	SWagh	SWagh	SWagh	SWagh
14	Sakshi Siddheshwar Kathale	S.S.Kathale	S.S.Kathale	S.S.Kathale	S.S.Kathale	S.S.Kathale	S.S.Kathale
15	Sakshi Vishnu Jadhav	S.Jadhav	S.Jadhav	S.Jadhav	S.Jadhav	S.Jadhav	S.Jadhav
16	Sanskruiti Santosh Kulthe	SKulthe	SKulthe	SKulthe	SKulthe	SKulthe	SKulthe
17	Shyam Vijay Gund	S.Gund	S.Gund	S.Gund	S.Gund	S.Gund	S.Gund
18	Vaishnavi Anil Shelke	V.Shelke	V.Shelke	V.Shelke	V.Shelke	V.Shelke	V.Shelke
19	Gayatri Rajendra Joshi	G.Joshi	G.Joshi	G.Joshi	G.Joshi	G.Joshi	G.Joshi
20	Gayatri Rameshwar Saste	G.Saste	G.Saste	G.Saste	G.Saste	G.Saste	G.Saste
21	Mahek Parveen Alim Khan	M.Parvehan	M.Parvehan	M.Parvehan	M.Parvehan	M.Parvehan	M.Parvehan
22	Vaishnavi Shivshankar Hade	V.Hade	V.Hade	V.Hade	V.Hade	V.Hade	V.Hade
23	Dnyaneshwari Vishnu Bhawar	Bhavar	Bhavar	Bhavar	Bhavar	Bhavar	Bhavar
24	Pranali Pradeep Mule	P.Mule	P.Mule	P.Mule	P.Mule	P.Mule	P.Mule
25	Rahul Vijay Gawai	R.Gawai	R.Gawai	R.Gawai	R.Gawai	R.Gawai	R.Gawai
26	Komal Shivanarayan Deshmane	Deshmane	Deshmane	Deshmane	Deshmane	Deshmane	Deshmane
27	Nikita Gopal Molvande	Molvande	Molvande	Molvande	Molvande	Molvande	Molvande
28	Pooja Datta Mukhmale	P.Mukhmale	P.Mukhmale	P.Mukhmale	P.Mukhmale	P.Mukhmale	P.Mukhmale
29	Shivani Sopan Panalkar	Panalkar	Panalkar	Panalkar	Panalkar	Panalkar	Panalkar
30	Vaishnavi Vithoba Ghube	V.Ghube	V.Ghube	V.Ghube	V.Ghube	V.Ghube	V.Ghube
31	Vidya Narendra Paturkar	Paturkar	Paturkar	Paturkar	Paturkar	Paturkar	Paturkar
32	Bharti Dnyaneshwar Sapkal	Sapkal	Sapkal	Sapkal	Sapkal	Sapkal	Sapkal
33	Rohini Gajanan Parihar	Parihar	Parihar	Parihar	Parihar	Parihar	Parihar
34	Vishal Subhash Raut	V.Raut	V.Raut	V.Raut	V.Raut	V.Raut	V.Raut
35	Ritikesh Maroti Ghorpade	Ghorpade	Ghorpade	Ghorpade	Ghorpade	Ghorpade	Ghorpade
36	Sagar Gajanan Ingle	S.Ingle	S.Ingle	S.Ingle	S.Ingle	S.Ingle	S.Ingle

Action Taken Report of Certificate Course on Apiculture, organized by Department of Zoology, Shri Shivaji Science And Arts College Chikhli

37	Ishwar Vijay Kankhar	<u>Ishwar</u>	AB	<u>Ishwar</u>	<u>Ishwar</u>	<u>Ishwar</u>	<u>Ishwar</u>
38	Vaibhav Sudam Ugale	<u>ugale</u>	<u>ugale</u>	<u>ugale</u>	<u>ugale</u>	<u>ugale</u>	<u>ugale</u>
39	Jayshree Prakash Bhutekar	<u>Bhutekar</u>	<u>Bhutekar</u>	<u>Bhutekar</u>	AB	<u>Bhutekar</u>	<u>Bhutekar</u>
40	Sagar Sheshrao Suradkar	<u>Sagar</u>	<u>Sagar</u>	<u>Sagar</u>	<u>Sagar</u>	<u>Sagar</u>	<u>Sagar</u>
41	Vaishnavi Vishnu Shete	<u>Shete</u>	<u>Shete</u>	<u>Shete</u>	<u>Shete</u>	<u>Shete</u>	<u>Shete</u>
42	Swaraj Ramdas Jadhav	<u>Swaraj</u>	AB	<u>Swaraj</u>	<u>Swaraj</u>	<u>Swaraj</u>	<u>Swaraj</u>
43	Ankita Dnyaneshwar Sapkal	<u>Sapkal</u>	<u>Sapkal</u>	<u>Sapkal</u>	<u>Sapkal</u>	<u>Sapkal</u>	<u>Sapkal</u>
44	Santoshi Dilip Gadekar	<u>Santoshi</u>	<u>Santoshi</u>	<u>Santoshi</u>	<u>Santoshi</u>	<u>Santoshi</u>	AB



Dr. R. B. Gade
Course Coordinator



Dr. V. M. Hemke
H.O.D.
Department of Zoology
HEAD
Department of Zoology
Shri Shivaji Sci. & Arts College
Chikhli Dist. Buldana 443201

Attendance of the Students

Action Taken Report of Certificate Course on Apiculture, organized by Department of Zoology, Shri Shivaji Science And Arts College Chikhli

Certificate Course On Apiculture : Participant Feedback Form

Course Name: Certificate Course on Apiculture
Name of Course Coordinator: Dr. R. B. Gade
Date of Completion: 15/02/2026

* Indicates required question

Name of student *

Your answer

Class *

Your answer

Course Content & Design *

(Please rate the following items on a scale of 1 to 5 (1 = Strongly Disagree, 5 = Strongly Agree).

1. The course objectives were clearly stated at the beginning.
2. The balance between theory and practical sessions was appropriate.
3. The sequence of topics (Biology → Management → Harvesting) was logical.
4. The course materials (handouts/manuals) were useful and easy to follow.
5. The course has prepared me to start my own apiary/beekeeping business.

1 2 3 4 5

☆ ☆ ☆ ☆ ☆

Overall Satisfaction & Future Intent *

Very Satisfied
 Satisfied
 Neutral
 Dissatisfied

Open-Ended Comments

Your answer

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Technical Module Feedback *

How effectively were the following specific topics covered? (1 = Poor, 5 = Excellent)

1. **Bee Biology:** Understanding Queens, Workers, and Drones.
2. **Hive Management:** Installation, inspection, and seasonal care.
3. **Pest & Disease Control:** Identifying and treating Varroa mites, etc.
4. **Honey Processing:** Extraction, filtration, and quality testing.
5. **Value Addition:** Products like bee wax, pollen, and royal jelly.
6. **Economics:** Cost of inputs, marketing, and legal regulations.

1 2 3 4 5

☆ ☆ ☆ ☆ ☆

Practical & Field Experience *

1 2 3 4 5

☆ ☆ ☆ ☆ ☆

Instructor Performance *

Please rate the instructor on the following in Combine:

1. Depth of knowledge in Apiculture.
2. Ability to handle live bees and demonstrate techniques.
3. Responsiveness to questions and student engagement.

1 2 3 4 5

☆ ☆ ☆ ☆ ☆

Feedback Form

Action Taken Report of Certificate Course on Apiculture, organized by Department of Zoology, Shri Shivaji Science And Arts College Chikhli

Feedback Form generated by Google form

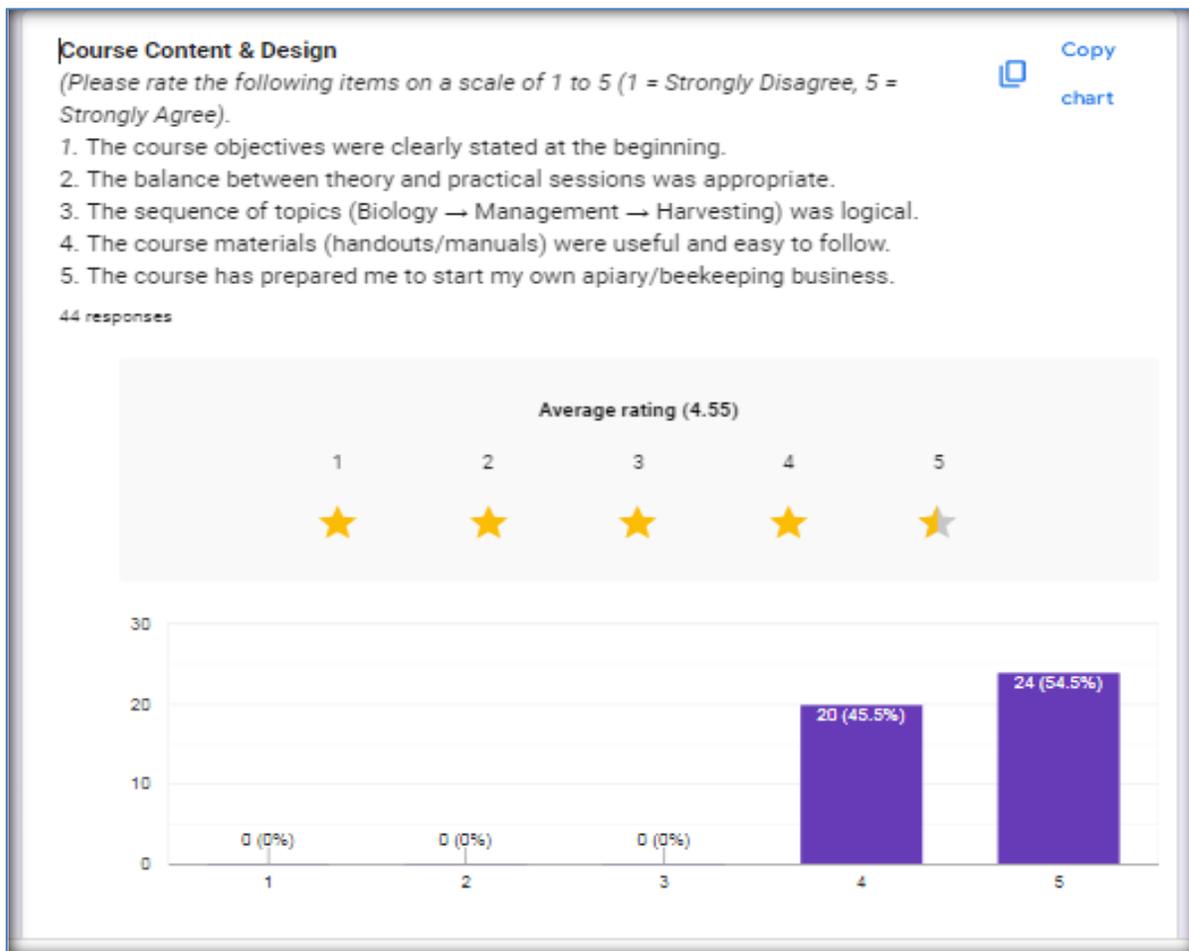
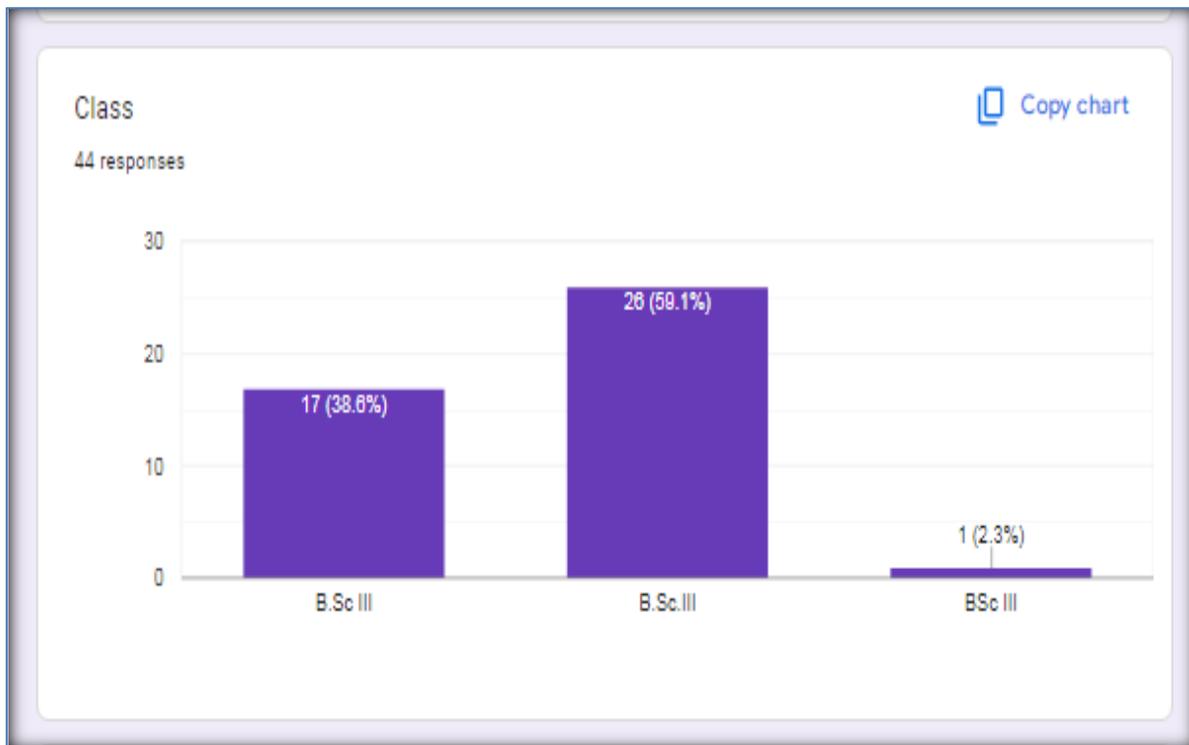
Course Content & Design (Please rate the following items on a scale of 1 to 5 (1 = Strongly Disagree, 5 = Strongly Agree). 1. The course objectives were clearly stated at the beginning. 2. The balance between theory and practical sessions was appropriate. 3. The sequence of topics (Biology → Management → Harvesting) was logical. 4. The course materials (handouts/manuals) were useful and easy to follow. 5. The course has prepared me to start my own apiary/beekeeping business.	Technical Module Feedback How effectively were the following specific topics covered? (1 = Poor, 5 = Excellent) 1. Bee Biology: Understanding Queens, Workers, and Drones. 2. Hive Management: Installation, inspection, and seasonal care. 3. Pest & Disease Control: Identifying and treating Varroa mites, etc. 4. Honey Processing: Extraction, filtration, and quality testing. 5. Value Addition: Products like bee wax, pollen, and royal jelly. 6. Economics: Cost of inputs, marketing, and legal regulations.	Practical & Field Experience	Instructor Performance Please rate the instructor on the following in Combine: 1. Depth of knowledge in Apiculture. 2. Ability to handle live bees and demonstrate techniques. 3. Responsiveness to questions and student engagement.	Overall Satisfaction & Future Intent	Open-Ended Comments	Name of student	Class
5	5	1	4	Satisfied	It's Good	Arti Raju Ingle	B.Sc.III
5	4	5	5	Very Satisfied	Good conduction	Srushti Ganesh Kale	B.Sc.III
4	5	4	4	Satisfied	Good	Komal Kishor Padghan	B.Sc.III
5	4	5	5	Very Satisfied	Good Conduction	Nikita Bhijangrao Nikhate	B.Sc.III
5	4	4	4	Satisfied	Excellent	Pranjali Digambar Dhokane	B.Sc.III
4	5	4	5	Very Satisfied	Good conduct	Saheli Santosh Gondhane	B.Sc.III
4	4	5	4	Satisfied	Excellent	Dipti Arvind Jadhao	B.Sc.III
5	4	5	5	Very Satisfied	Good Conduction	Kiran Munshiram Sathe	B.Sc.III
4	5	4	4	Very Satisfied	Excellent	Komal Eknath Wagh	B.Sc.III
4	5	4	4	Satisfied	Good	Nutan Vitthal Patil	B.Sc.III
5	5	4	5	Very Satisfied	Good conduct	Komal Sunil Sathe	B.Sc.III
4	4	5	4	Satisfied	Excellent	Roshani Rameshwar Waghmare	B.Sc.III
5	5	4	4	Satisfied	Good conduct	Sakshi Dnyaneshwar Wagh	B.Sc.III
5	4	4	5	Very Satisfied	Good Conduct	Sakshi Vishnu Jadhao	B.Sc.III
4	5	4	4	Satisfied	Satisfied	Sakshi Siddheshwar Kathale	B.Sc.III
4	5	4	5	Very Satisfied	Excellent	Sham Vijay Gund	B.Sc.III
5	5	4	5	Very Satisfied	Good Conduct	Sanskriti Santosh Kulthe	B.Sc.III
5	4	5	4	Very Satisfied	Good	Vaishnavi Anil Shelke	B.Sc.III
5	5	4	5	Very Satisfied	Good Conduct	Gayatri Rajendra Joshi	B.Sc.III
4	5	4	5	Very Satisfied	Good	Gayatri Rameshwar Saste	B.Sc.III
5	4	5	4	Satisfied	Good conduct	Mahek Parveen ali Khan	B.Sc.III
5	4	5	5	Satisfied	Good	Vaishnavi Shivshankar Hade	B.Sc.III

Action Taken Report of Certificate Course on Apiculture, organized by Department of Zoology, Shri Shivaji Science And Arts College Chikhli

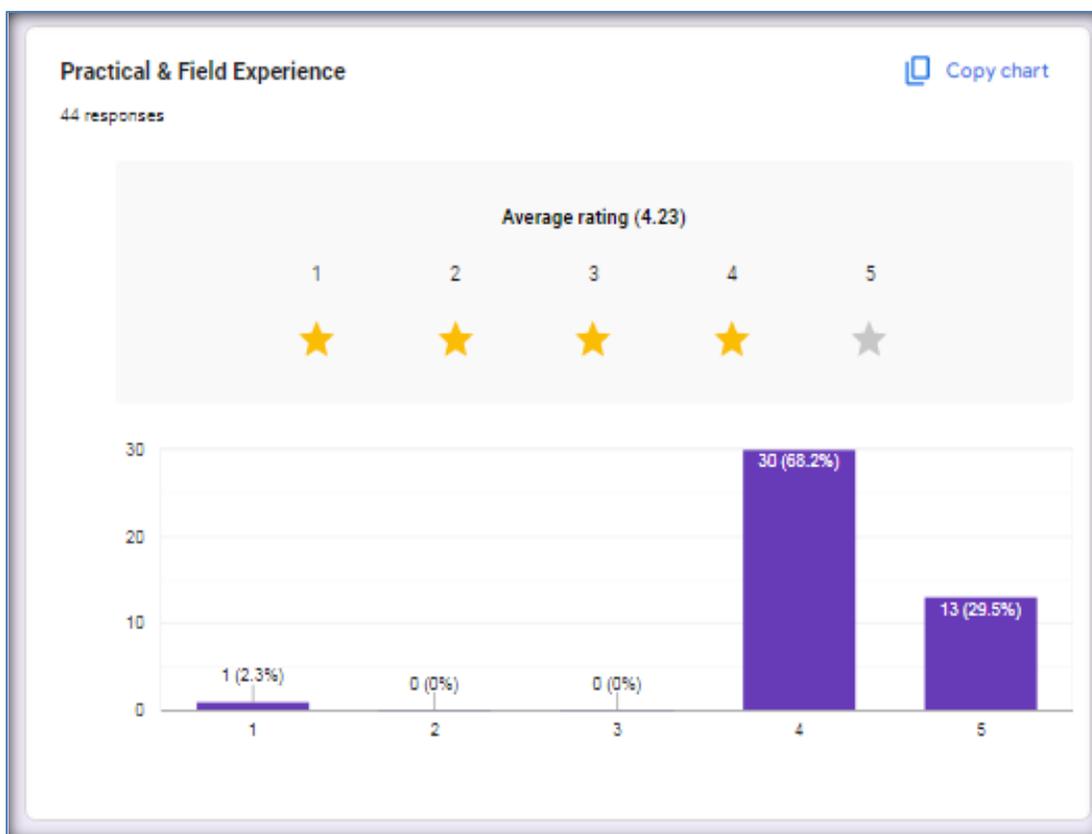
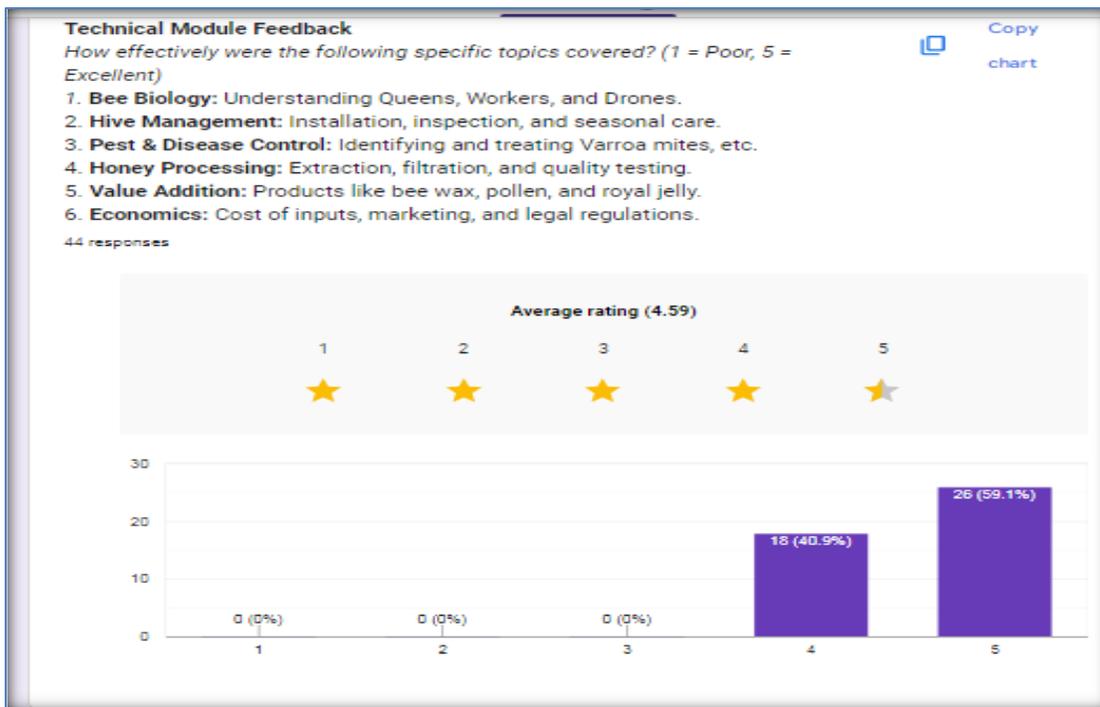
4	5	4	4	Very Satisfied	Good	Pranali Pradip Mule	B.Sc III
5	4	5	4	Very Satisfied	Good conduct	Dnyaneshwari Vishnu Bhawar	B.Sc.III
5	4	4	4	Satisfied	Good	Rahul Vijay Gawai	B.Sc III
4	5	4	4	Very Satisfied	Good	Nikita Gopal Molvande	B.Sc III
5	5	4	5	Very Satisfied	Good conduct	Komal Shivnarayan Deshmane	BSc III
4	5	4	4	Satisfied	Good	Pooja Datta Makhmale	B.Sc III
5	5	4	5	Very Satisfied	Good Conduct	Shivani Sopan Panhalkar	B.Sc.III
4	5	4	4	Satisfied	Good	Vaishnavi Vithoba Ghube	B.Sc III
4	5	4	4	Very Satisfied	Good	Vidya Narendra Paturkar	B.Sc.III
5	4	5	4	Satisfied	Excellent	Rohini Gajanan Parihar	B.Sc III
5	4	4	4	Satisfied	Good Conduct	Bharti Dnyaneshwar Sapkal	B.Sc.III
4	5	5	5	Satisfied	Good	Vishal Subhash Raut	B.Sc.III
4	5	4	4	Satisfied	Good	Sagar Gajanan Ingle	B.Sc III
5	5	4	4	Very Satisfied	Good conduct	Ritikesh Maroti Ghorapade	B.Sc.III
4	4	4	4	Very Satisfied	Good	Ishwar Vijay Kankhar	B.Sc.III
4	4	5	4	Very Satisfied	Good	Jayshri Prakash Bhutekar	B.Sc.III
4	5	5	5	Very Satisfied	Good Conduct	Vaibhav Sudam Ugle	B.Sc.III
5	4	4	5	Very Satisfied	Good	Sagar Sheshrao Suradkar	B.Sc III
5	5	4	4	Very Satisfied	Good Conduct	Vaishnavi vishnu Shete	B.Sc.III
5	5	4	5	Very Satisfied	Good	Swaraj Ramdas Jadhav	B.Sc.III
5	4	4	5	Very Satisfied	Good	Santoshi Dilip Gadekar	B.Sc III
4	5	4	5	Very Satisfied	Good conduct	Ankita Dnyaneshwar Sapkal	B.Sc.III

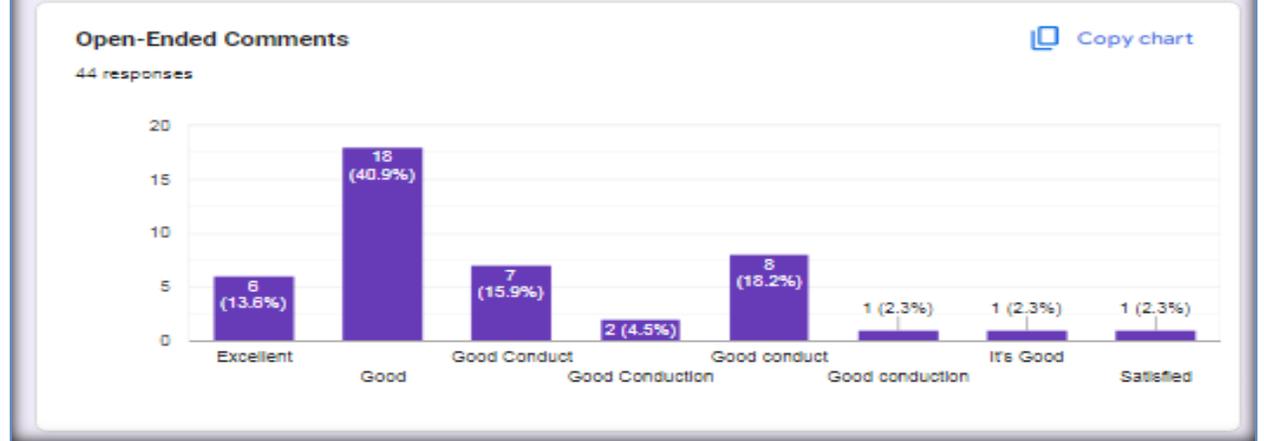
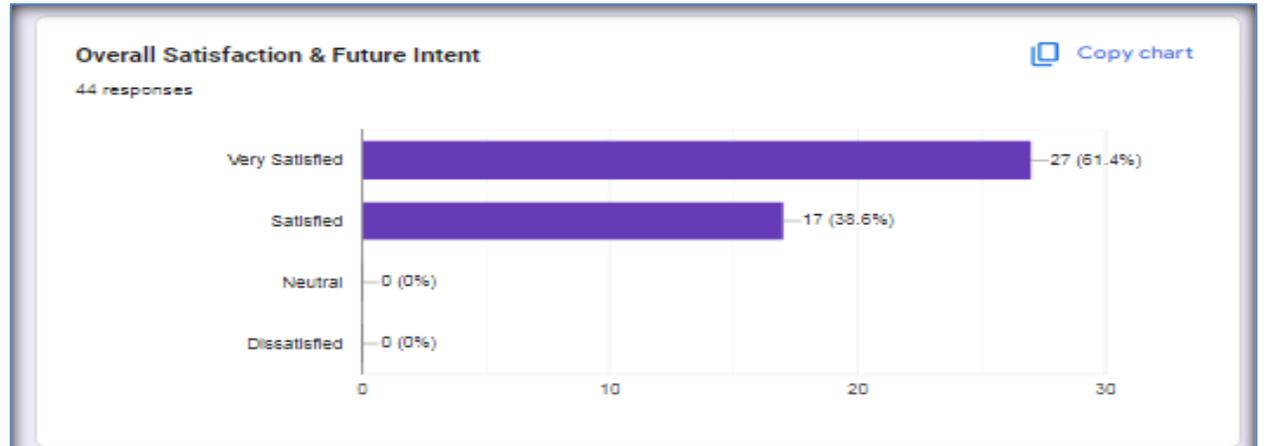
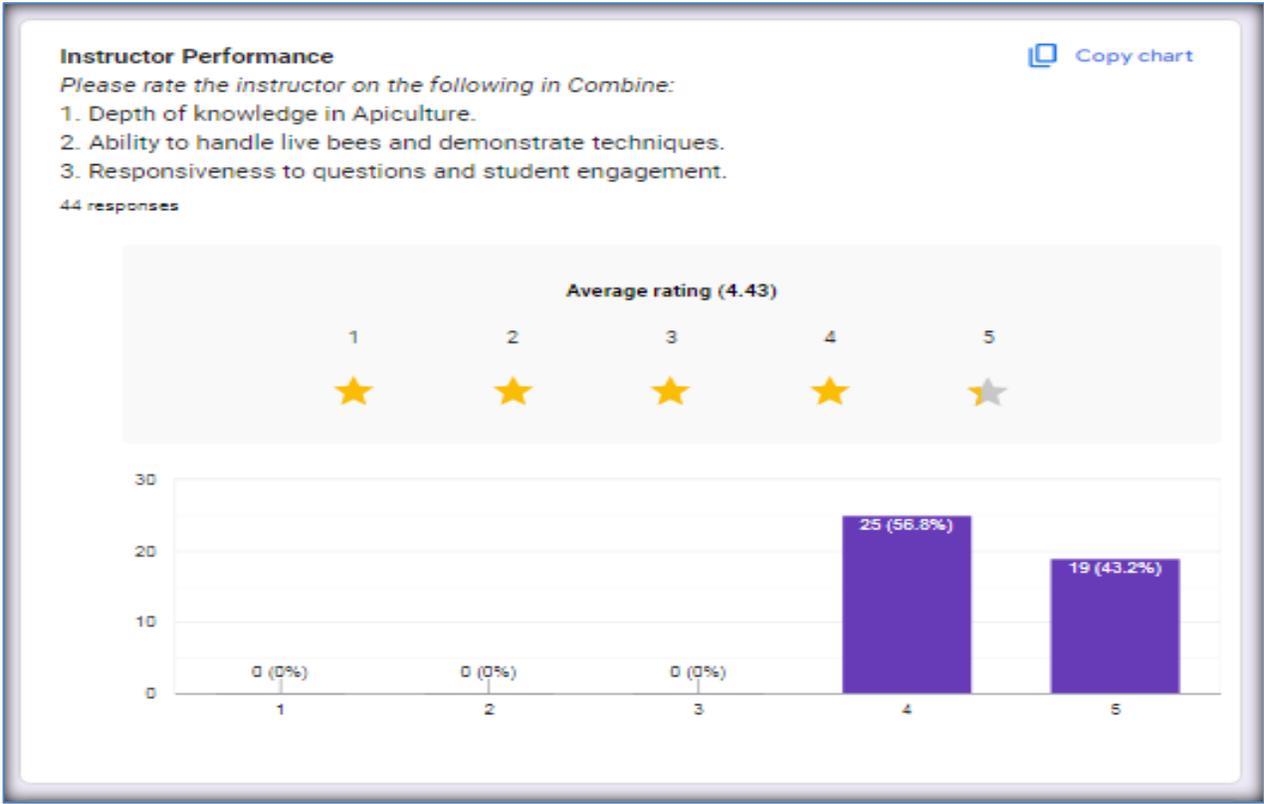
Feedback Received from 44 Students

Action Taken Report of Certificate Course on Apiculture, organized by Department of Zoology, Shri Shivaji Science And Arts College Chikhli



Action Taken Report of Certificate Course on Apiculture, organized by Department of Zoology, Shri Shivaji Science And Arts College Chikhli





Graphical Representation of Feedback Analysis

Action Taken Report of Certificate Course on Apiculture, organized by Department of Zoology, Shri Shivaji Science And Arts College Chikhli

		Shri Shivaji Education Society, Amravati's SHRI SHIVAJI SCIENCE & ARTS COLLEGE CHIKHLI DIST. BULDANA (M.S.) NAAC Reaccredited with 'B...' Grade (CGPA3.00) ISO 9001:2015		
Department of Zoology				
CERTIFICATE OF COMPLETION				
This is to certify that				
Mr. / Ms. Arti Raju Ingle of B. Sc. has successfully completed the 3-Month Certificate Course on Apiculture (Beekeeping) organized by the Department of Zoology, Shri Shivaji Science & Arts College, Chikhli.				
The course was conducted from 15th November 2025 to 15th February 2026 . During this period, the candidate gained practical skills in beekeeping, honey and wax processing, and colony management.				
We wish him/her a bright future in the field of entrepreneurship and agriculture.				
 Dr. R. B. Gade Course Coordinator	 Dr. V. M. Hemke Head, Dept. of Zoology	 Dr. P. R. Padole Principal		

Certificate

Action Taken Report of Certificate Course on Apiculture, organized by Department of Zoology, Shri Shivaji Science And Arts College Chikhli



9727+7V7, MH SH 176, Gandhi Nagar, Chikhli, Maharashtra 443201, India

Chikhli
Maharashtra
India



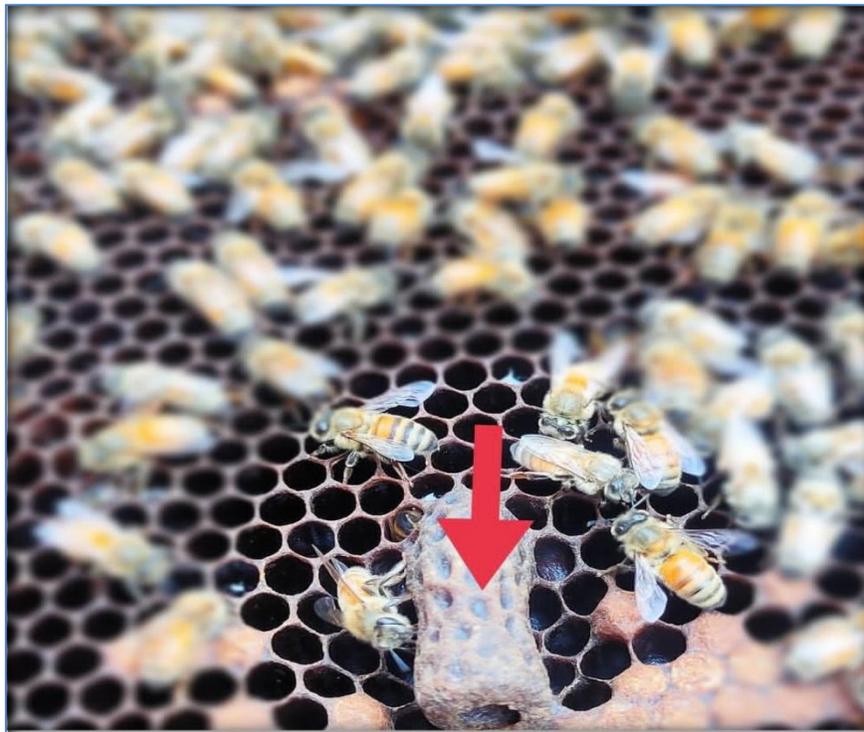
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Action Taken Report of Certificate Course on Apiculture, organized by Department of Zoology, Shri Shivaji Science And Arts College Chikhli



Photographs during Course

Curriculum

FACULTY PROFILE

Name of Faculty	Dr. Rajendra Balnath Gade
Name of the Department	Zoology
Educational Qualification	M.Sc. Ph. D.
Designation	Assistant Professor
Email - id	drgade1990@gmail.com
Contact	95.45.56.53.59 / 86.68.63.35.83
Specialization	Parasitology/Nematology
Teaching Experience	6 Years
Research Experience	9 Years



Educational Qualifications: -

Sr. No	Class	Board/University	Passing Year	Percentage (%)
1	Ph.D. Zoology	Dr. B. A. M. U, Aurangabad	Dec - 2018	Viva
2	M. Sc. Zoology	Dr. B. A. M. U, Aurangabad	June - 2014	73.8%
3	B. Sc. Computer	Dr. B. A. M. U, Aurangabad	June - 2012	76.78%
4	HSC	Pune Board	June - 2009	52.33%
5	SSC	Pune Board	June - 2007	72.15%

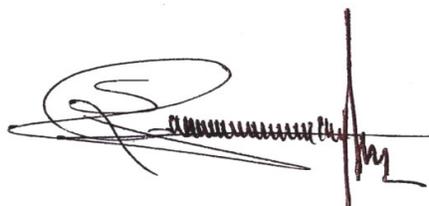
No. of Patent Published/Granted/under process:02

Sr. No	Innovation	Name of Country	National/International	Position	Year of Publication
1	Novel Oral Strip or Thin Film Form of Diclofenac Sodium and Process for Manufacturing the Same	Germany	International	Granted	16/02/2022
2	Method and Composition for Targeted Cancer Treatment Using pH-Responsive Nanoparticles for Controlled Drug Release	Germany	International 20 2024 104 614	Granted	27/11/2024

Curriculum

Declaration

I hereby declare that the all above given information by me is true and correct to the best of my knowledge.



Dr. Rajendra Balnath. Gade
Assistant Professor
Shri Shivaji Science And Arts College Chikhli.
