



St. Thomas College, Kozhenchery
Affiliated to Mahatma Gandhi University, Kottayam
Accreted with 'A++' Grade by NAAC

INNOHIVE
Innovation and Entrepreneurship
Development Cell (IEDC)

ANNUAL REPORT
2024–2025

Skill Development Projects and Programmes

1. Innohive – Innovation and Entrepreneurship Development Cell (IEDC)

- **Organized by:** St. Thomas College under Kerala Startup Mission (KSUM)
- **Launch Event:** Inaugurated by Mr. Adarsh Vijayan (Team Lead, KSUM)
- **Objective:** To create a campus innovation ecosystem offering mentorship, incubation, and technical guidance.
- **Outcomes:** Student startup support, idea mentoring framework, and entrepreneurship awareness across departments.
- **Alignment:** NEP 2020 focus on entrepreneurial education and experiential learning.

2. Star-Making Workshop

- **Organized by:** Department of Physics
- **Nature:** In-house training programme (extension activity)
- **Duration:** Single-day hands-on workshop
- **Focus:** Design and construction of Christmas stars using local eco-friendly materials; applied concepts of symmetry, stability, and light diffusion.
- **Participants:** Students from all Physics batches (50 stars crafted).
- **Outcome:** Enhanced creativity, teamwork, problem-solving, and link between science and aesthetics.
- **NEP Link:** Experiential and arts-integrated learning.

3. Short-Term Course in Mushroom Cultivation – Phase I

- **Organized by:** Department of Botany in association with Skill Development Center
- **Objective:** Empowering women students toward self-reliance and entrepreneurship.
- **Outcomes:**
 - Launch of two student brands: **Basiico Mushroom** (FSSAI-certified) and **Myco Wonder Mushroom** (Start Up).
 - Logo release by Dr. Sebastian Paul (Writer & Social Activist).
- **Impact:** Women's economic empowerment and sustainable income generation.
- **NEP Focus:** Vocational education and local entrepreneurship promotion.

4. NSDC-Approved Certificate Course in Mushroom Cultivation – Phase II

- **Organized by:** P.G. & Research Department of Botany

- **Affiliation:** National Skill Development Corporation (GoI)
- **Duration:** 3 months (Started 13 January 2025)
- **Coordinator:** Ms. Adheena Elza Johns
- **Participants:** 12 students from various disciplines
- **Highlight:** Student startup “**Basico**” by Ms. Harsha S. Kumar (established after course completion).
- **Learning Outcome:** Hands-on training in mushroom production and entrepreneurial skills.

5. Certificate Course in Beekeeping

- **Organized by:** Women’s Cell + IQAC + P.G. & Research Dept. of Zoology
- **Collaboration:** Khadi Gramodyog Vidyālaya (Mallappally)
- **Duration:** 3 days (14–16 October 2024)
- **Structure:** Theoretical sessions + field training at college apiary.
- **Resource Persons:** Sri. James Dominic & Smt. Jolly Lalan (KGV Mallappally).
- **Participants:** ~24 students (3 groups of 8).
- **Outcome:** Hands-on apiculture training, sustainable livelihood awareness, and certification.
- **NEP Focus:** Vocational skills and environmental sustainability.

6. Driving Training Course for Students and Staff

- **Organized by:** Women’s Cell (St. Thomas College)
- **Collaboration:** Bethel Driving School, Kozhencherry
- **Inauguration:** 23 October 2024 by Dr. Saramma Varghese
- **Participants:** 20 students and staff (licensed for two- & four-wheelers).
- **Duration:** Practical and theoretical sessions (traffic rules, vehicle maintenance, safety).
- **Outcome:** 100 % license achievement; empowerment through mobility and safety training.

7. Tailoring Course

- **Organized by:** Women’s Cell in association with Khadi Gramodyog Vidyālaya (Mallappally)
- **Duration:** 2 months | Fee: ₹ 2000 | Participants: 7 students
- **Focus:** Cutting, stitching, and designing garments with hands-on practice.
- **Outcome:** Students successfully completed dress and blouse projects; some initiated home-based tailoring units.
- **Certification:** Issued by KGV Mallappally.

8. Beautician Course

- **Organized by:** Women's Cell + KGV Mallappally
- **Duration:** 2 months | Fee: ₹ 2000 | Participants: 3 students
- **Curriculum:** Skincare, haircare, make-up, bridal makeovers with live practice.
- **Outcome:** Participants qualified for beauty parlour employment or home-service startups.
- **Certification:** Issued by KGV Mallappally

Preface

The Innovation and Entrepreneurship Development Cell (IEDC) of St. Thomas College, Kozhencherry, stands as a vibrant platform translating the vision of the National Education Policy 2020 (NEP 2020) into institutional practice. The NEP 2020 envisions an education system that fosters creativity, critical thinking, multidisciplinary learning, and innovation-driven development. Guided by these principles, the College has undertaken diverse initiatives through IEDC and associated departments to nurture entrepreneurial competencies, promote experiential learning, and create a self-reliant student community capable of contributing meaningfully to society and the economy.

The launch of the Innohive – Innovation and Entrepreneurship Development Cell, under the aegis of the Kerala Startup Mission (KSUM), marked a significant milestone in this transformative journey. The Cell aims to cultivate an innovation ecosystem on campus by providing mentoring, incubation support, and technical guidance to students aspiring to convert their ideas into viable ventures. The inaugural address by Mr. Adarsh Vijayan, Team Lead, KSUM, inspired students to dream beyond conventional academic boundaries and to align their learning with sustainable and socially beneficial innovation.

In alignment with NEP’s thrust on hands-on and skill-integrated learning, the College organized a range of multidisciplinary programmes that blended scientific understanding with social purpose. The Department of Physics conducted a Star-Making Workshop as part of its extension activities, integrating concepts of physics, design, and sustainability. The activity encouraged teamwork, problem-solving, and aesthetic appreciation—demonstrating NEP’s emphasis on linking classroom learning to real-world creativity and cultural expression.

The Department of Botany, in collaboration with the Skill Development Center, initiated a Short-Term Course on Mushroom Cultivation aimed at empowering women students. The course enabled participants to establish self-employment ventures and achieve economic independence. Their success stories—Basiico Mushroom, an FSSAI-certified brand, and Myco Wonder, an edible mushroom product developed with IEDC support—reflect the spirit of ‘Atmanirbhar Bharat’ envisioned in NEP 2020. The release of the Myco Wonder logo by Dr. Sebastian Paul, renowned writer and social activist, symbolized the institutional commitment to linking science, skill, and social entrepreneurship.

The Department of Zoology, along with the Women’s Cell and IQAC, organized a Certificate Course in Beekeeping in association with Khadi Gramodyog Vidyālaya, Mallappally. This three-day programme provided participants with practical exposure to apiculture, combining theoretical insights with field experience. The initiative aligned with NEP’s directive to integrate vocational education within mainstream higher education, fostering sustainable livelihoods and environmental stewardship.


Another noteworthy initiative under the Women’s Cell was the Driving Training Course for students and staff, designed to promote mobility, confidence, and safety awareness. Conducted in collaboration with Bethel Driving School, Kozhencherry, the programme resulted in all participants successfully obtaining two- and four-wheeler licenses—empowering them with essential life skills and a sense of independence.

Collectively, these endeavours epitomize the holistic and inclusive vision of NEP 2020—linking knowledge with application, learning with livelihood, and education with empowerment. Through innovation, entrepreneurship, and community-centred initiatives, St. Thomas College continues to redefine higher education as a dynamic force for social transformation, sustainability, and nation-building.


Report on the Inaugural Function of IEDC

St. Thomas College, Kozhencherry, marked a significant milestone with the inauguration of the **Innohive- Innovation and Entrepreneurship Development Cell (IEDC)**. The initiative aims to foster a culture of innovation and entrepreneurship among students and equip them with the skills required to convert their ideas into successful ventures. **The Innohive** IEDC has been launched under the framework of the Kerala Startup Mission (KSUM), which works to strengthen the startup ecosystem across the state. The cell is expected to provide guidance, mentorship, and resources to students with innovative ideas and entrepreneurial aspirations.


Kerala Startup Mission Team Lead **Mr. Adarsh Vijayan** was the chief guest at the inaugural ceremony. He officially inaugurated the Innohive IEDC and interacted with the students. During his address, he emphasized the crucial role of innovation in addressing modern-day challenges and the importance of nurturing entrepreneurial skills at the academic level. He also highlighted the various schemes, funding support, and incubation opportunities available to students through KSUM. Mr. Vijayan encouraged students to dream big, think creatively, and work towards developing impactful solutions for society. College Principal **Dr. George K. Alex** presided over the function and expressed his happiness over the establishment of the IEDC. He stated that the cell would serve as a platform for young minds to explore new possibilities and contribute to national development through creative ideas. Nodal Officers **Dr. Jijoy P. Mathew** and **Dr. Ria Mammen** briefed the gathering about the objectives and future programs of the Innohive IEDC.




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Managed by the Malankara Mar Thoma Syrian Church | princ@stthomascollege.info



**Kerala Startup Mission
INNOVATION AND
ENTREPRENEURSHIP
DEVELOPMENT CENTRE**



**INAUGURATION OF
IEDC**
INNOHIVE-WHERE IDEAS HIVE AND THRIVE



Mr. Adarsh Vijayan
Project Lead, IEDC
Kerala Start Up Mission

13-10-2025 Monday @9.30AM
Venue: Dr. Juhanon Mar Thoma Hall



Report on Star Making Workshop

As part of the Physics Department's extension activities and in celebration of Christmas, an in-house training programme on Star Making was organized. This initiative was designed in alignment with the core principles of the National Education Policy (NEP) 2020, which emphasizes experiential learning, creativity, and the integration of vocational skills into mainstream education.

The workshop focused on crafting Christmas stars using raw materials readily available in the local market. This hands-on activity provided students with a platform to explore the practical application of physics concepts such as symmetry, structural stability, and light diffusion, thereby bridging the gap between theoretical knowledge and real-world application.

Students from all batches of the Physics Department actively participated in the programme. The collaborative nature of the activity fostered peer learning, teamwork, and problem-solving—skills that are central to NEP's vision of holistic and multidisciplinary education. The process also encouraged sustainable practices by promoting the use of affordable and eco-friendly materials.

By the end of the session, students had successfully assembled fifty Christmas stars. Beyond the festive spirit, the workshop served as a meaningful exercise in design thinking, craftsmanship, and community engagement. It also nurtured aesthetic sensibilities and cultural appreciation, aligning with NEP's emphasis on integrating arts and heritage into the curriculum.

This initiative stands as a testament to the department's commitment to implementing NEP-aligned pedagogical practices that are learner-centric, skill-oriented, and rooted in Indian traditions and values.



Participants List:

IEDC members from various classes. There are 77 members actively involved in IEDC activities.

5

Date: 12/10/2025

Venue: Inhesan Mar Thoma Hall

Key Note: Atish Vijayan

Sl. No.	Name	Class	Sign.
1.	Vansha Anna Viji	DC2 BBA	
2.	Sharon Kiza Saja	DC2 English	
3.	Nandhu R. Nair	DC2 Bcom (Agm)	
4.	Akmal Sha	DC2 Bcom (Agm)	
5.	Jeba Shreya Angel	DC2 English	
6.	Lakshay	DC1 English	
7.	Abhishek Kaishava	DC1 Physics	
8.	A. Adhithyan	DC1 Zoology	
9.	Anandhu V. Suresh	DC1 Zoology	
10.	Aruv Anus Mathan	DC3 Zoology	
11.	+Kanna Ajayan	DC III Zoology	
12.	Ira. M. Siva	DC II Computer Science	
13.	Sneha S	DC1 Zoology	
14.	Bhagya Lakshmi Ajayan	DC1 Zoology	
15.	Anantha Sajeer	DC2 BBA	
16.	Sreelakshmi P. U	DC1 BBA	
17.	Krupa Kulas	DC2 BBA	
18.	Marjima P Manoj	DC2 BBA	
19.	Abhinav K Venu	DC2 BBA	
20.	Bhadra. T	DC2 BBA	
21.	Sreelakshmi S	DC2 BBA	
22.	Liaho. S	DC2 BBA	
23.	Coral. C. Babu	DC1 BBA	
24.	Alasin Hanu Samuel	DC2 BBA	
25.	Nirmal. Manoj	DC2 BBA	
26.)	Abhinav A. Nair	DC1 Bcom F&T	
27)	Jayal. M. Samuel	PG1 Botany	

28)	Nayana K. Deep	DC2 Chemistry	Nayana
29)	Vasuki Mary Veerghav	DC2 Chemistry	John
30)	Dabo K. Laksh	DC2 B.com (20)	Dr.
31)	Enhad Hassan	DC2 Computer science	Felix
32)	NEBUL RAMAN RK	DC2 Computer science	John
33)	Danjith V	DC2 Chemistry	Angie
34)	Painy P Varghese	DC2 Economics	John
35)	Vinod C	DC2 Chemistry	John
36)	Rupa Raju	DC1 Chemistry	John
37)	Sreerith V. Kunnar	DC2 Zoology	John
38)	Nithin Shiju	DC2 Economics	John
39)	Souhav M.S	DC2 ECONOMICS	John
40)	Muhammed Jasim. K J	DC2 English	John
41)	Nidhin Kunnar H	Pg2 Malayalam	John
42)	Vidhu Kesavaiah B S	Pce1 Mathematics	John
43)	Kedarnath C S	DC3 Mathematics	John
44)	Jeery Joseph Sam	" Zoology	John
45)	Anayraj T	" "	John
46)	Haridya Harikrishnan	DC2 Physics	John
47)	Vaishya Prasad	" "	John
48)	Ashwin Regi	" "	John
49)	Amrita V. Nair	" "	John
50)	Vishnu Prasad	PB12 ZOOLOGY	John
51)	Athira P Nair	DC1 B.com F&T	John
52)	Meera Geomalya P	DC2 Botany	John
53)	Ahalya S	DC2 Economics	John
54)	Amegha Binny	DC2 Economics	John
55)	Pooja M Mornan	PB12 Economics	John
56)	Sandeep George Mathew	Pce1 B Commerce	John
57)	Jatin John James	DC1 Commerce	John
58)	DEVROTHAN. A	DC1 Commerce	John
59)	Anantha S. Nair	DC1 Commerce	John
60)	Josh R Joseph	DC1 Commerce	John

61)	Chris Thomas Liji	DCI	Commerce	ls
62)	Jithin Thomas	Dci	Commerce	Jithin
63	Adithya Mabeo	Dci	Commerce	Adithya
64.	KEVIN MATHEWS KASHY	DCI	COMMERCE	K
65.	Devanarayanas . P	DCI	Commerce F&T	Dev.
66.	Nikhil P.K	DCI	Commerce F&T	Nikhil
67	Gobul Krishna . S	DCI	Commerce F&T	Gobul
68	Denson Matthew	DC2	commerce F&T	Denson
69	Growtham.G	DC3	Commerce F&T	G
70	Benson Bunt	DC1	Commerce A&M	B
71	John Johnson	DC1	Commerce F&T	John
72	Albin Jayan	DC1	Commerce F&T	Albin
73	Lachu Sajan Thomas	DC1	Commerce F&T	Lachu
74	Adith . M . Nair	DC1	Commerce F&T	Adith
75.	Aduvithil . g . Turner	DC1	BSC Botany	Aduvithil
76	Justin Conner James	DC3	BA Economics	Justin
77	Linu K Mathew	DC3	Economics	Linu

D. Raj Manoj
Vey

Department of Botany:

Skill Development Initiative in Mushroom Cultivation

The Department of Botany, in collaboration with the Skill Development Center of the College, launched a short-term skill development course aimed at empowering women students through practical training and entrepreneurship. The primary objective of this programme was to enable participants to achieve self-reliance and generate a sustainable source of income to support their families.

As a result of the training, several participants successfully acquired hands-on skills in mushroom cultivation and initiated their own entrepreneurial ventures. The first student-led brand, “Basiico Mushroom,” was launched in 2024 as an in-house product. It later obtained FSSAI registration and was introduced into the local market, marking a significant milestone for the department’s skill-oriented initiatives.

Inspired by the success of this endeavour, another batch of students from the Department of Botany, in association with the Innovation and Entrepreneurship Development Cell (IEDC), launched “Myco Wonder”—an edible mushroom-based food product. The project is currently functioning successfully, demonstrating the department’s continued commitment to promoting entrepreneurship, innovation, and sustainable livelihood practices among students.



Dr. Sebastian Paul, renowned writer and social activist, released the logo of “Myco Wonder Mushroom” during the Commemoration Day Celebration. The event also featured the Myco Wonder team along with Mr. Shinu Koshy, IQAC Coordinator, and Rev. Abraham Thomas, Local Manager.



Skill Development Initiative:

NSDC-Approved Course on Mushroom Cultivation at St. Thomas College Inspires Student Startup

The Postgraduate and Research Department of Botany, St. Thomas College, Kozhencherry, organized an NSDC(GoI)-approved Certificate Course on “Mushroom Cultivation”, inaugurated on January 13, 2025, as part of its skill development initiatives. The course was coordinated by Ms. Adheena Elza Johns, and 12 students from various disciplines enrolled for the three-month training programme.

The course provided students with hands-on experience in cultivating mushrooms at the Mushroom Cultivation Lab of the Department of Botany, equipping them with practical skills and entrepreneurial insight.

One of the participants, Ms. Harsha S. Kumar, demonstrated exceptional dedication and innovation during the training programme. After

successfully completing the course, she established her own startup under the brand name “Basico”, focusing on edible mushroom cultivation.

According to Dr. Leena Abraham, Assistant Professor, Department of Botany, Ms. Harsha exhibited strong self-motivation, problem-solving ability, and resilience, which enabled her to begin cultivation with minimal facilities at home. Her networking and marketing skills further contributed to the successful sale of her first produce through local vendors.

The initiative highlights the Department’s commitment to skill-based education and entrepreneurship development, in alignment with national goals for fostering self-reliant and industry-ready graduates.

REPORT - CERTIFICATE COURSE IN BEEKEEPING

The Women's Cell, Internal Quality Assurance Cell (IQAC), and Postgraduate & Research Department of Zoology in collaboration with KHADI GRAMODYOG VIDYALAYA, MALLAPPALLY organized a three-day Skill Development Programme - "Certificate Course in Beekeeping" from 14th – 16th October 2024. The program aimed to familiarize students with the fundamentals and practical aspects of beekeeping, highlighting its significance and ease of practice.

On Day 1, the Certificate Course in Beekeeping was inaugurated on 14th October 2024 at the Prof. T.M. Joseph Seminar Hall. The inaugural session commenced with a prayer song, setting a solemn and respectful tone for the event. Dr. Prathibha Vasudevan, Women's Cell Secretary, welcomed the gathering. Dr. Sneha George Pachayil, Women's Cell President, presided over the function and delivered the presidential address. She emphasized the commitment of students in participating the skill development programme to foster academic excellence. The Skill Development Programme was inaugurated by Dr. George K. Alex, Principal of St. Thomas College, Kozhencherry. Sri. James Dominic, Former Principal, KGV Mallappally, delved into foundational aspects of beekeeping. Smt. Jolly Lalan, Senior Instructor, KGV Mallappally gave an introduction to the topic which included the importance of apiculture, the ease of its practice, and its benefits in sustainable agriculture and biodiversity. The felicitation speech were given by Dr. Jinsu Varghese, Head of the Department of Zoology and Mr. Shinu Koshy, IQAC Co-ordinator, in their speech, congratulated the Women's Cell and the Department of Zoology in their efforts to conduct the programme. The session was winded up by a technical session led by Sri. James Dominic, Former Principal, KGV Mallappally.

On the second day (15/10/2024), they included an interactive theoretical session, where the participants were divided into three groups of around eight students each. Sri. James Dominic made the session engaging by organizing games and group discussions related to beekeeping that made the class more interactive. In the afternoon session, the students had a field visit to the beekeeping unit maintained by the Department of Zoology. They observed the bee boxes and saw different castes of bees that helped them to understand the structure and functioning of a bee colony.

On Day 3 (16/10/2024), the programme commenced with the NSS Song, which set an energetic and enthusiastic tone for the day. The session began with Sri. James Dominic sharing the six key rules for a better life, emphasizing principles that could be applied both in personal growth and in the practice of apiculture. He provided practical instructions on the proper handling of bee hives, focusing on safety, techniques, and the importance of observation when working with bees. Following the theoretical session, participants moved outdoors for a hands-on field activity. Each group was assigned a bee hive to handle and was encouraged to observe various aspects of the hive, such as the

bees' behaviour, the structure of the hive, and the health of the combs. During this activity, the participants were tasked with cleaning the bee box and carefully examining each comb. By 11:30 AM, the group reconvened in the seminar hall, where participants shared their field experiences. Each group presented their observations and findings, leading to a knowledge-sharing session that enriched everyone's understanding of the apiculture process. The session ended with a valedictory function where the participants gave feedback about the course. Two members from each group shared their thoughts on the training, highlighting the effectiveness of the hands-on learning experience and the clarity of instructions provided by the trainers.

St Thomas College, Kozhencherry
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WOMEN'S CELL
INTERNAL QUALITY ASSURANCE CELL (IQAC) &
POSTGRADUATE AND RESEARCH
DEPARTMENT OF ZOOLOGY
 in association with
KHADI GRAMODYOG VIDYALAYA, MALLAPPALLY
 (KHADI & VILLAGE INDUSTRIES COMMISSION,
 GOVERNMENT OF INDIA)
 ORGANIZES
Certificate Course in Bee Keeping
 SKILL DEVELOPMENT PROGRAMME
DATE: 14 - 16 OCTOBER, 2024 | TIME: 9.30 A.M.
VENUE: PROF. T.M. JOSEPH SEMINAR HALL

Resource Person
 Sri. JAMES DOMINIC
 Former Principal, EGV, Mallappally
 Bee Keeping Fieldman (Retd.), Kerala Khadi & Village Industries Board

Inauguration
 Dr. GEORGE K. ALEX
 Principal,
 St. Thomas College, Kozhencherry

Training Coordinator
 Sri. JOLLY LALAN
 Senior Instructor, EGV, Mallappally

ORGANIZING COMMITTEE:

Dr. George K. Alex (Principal)	Dr. Prathiba Vasudevan (Secretary, Women's Cell)
Mr. Binu Keshy (IQAC Coordinator)	Mr. Jolly Lalan (Zoology Association President)
Dr. Jina Varghese (NAD, Zoology)	Mr. Benedict V. Kuter (Student Coordinator)
Dr. Sreed George Poojary (President, Women's Cell)	

PROGRAMME SCHEDULE

WOMEN'S CELL INTERNAL QUALITY ASSURANCE CELL (IQAC) & POSTGRADUATE AND RESEARCH DEPARTMENT OF ZOOLOGY

in association with

**KHADI GRAMODYOG VIDYALAYA, MALLAPPALLY
(KHADI & VILLAGE INDUSTRIES COMMISSION,
GOVERNMENT OF INDIA)**

Certificate Course in Bee Keeping

Day 1 (14.10.2024)	INAUGURAL SESSION 9.30 a.m. - 10.15 a.m.
Prayer Song	
Welcome Speech	: Dr. Prathibha Vasudevan (Secretary, Women's Cell)
Presidential Address	: Dr. Sneha George Pachayil (President, Women's Cell)
Inaugural Address	: Dr. George K. Alex (Principal)
Keynote Address	: Mr. James Dominic (Former Principal, KGV Mallappally)
Introduction to the Topic:	Smt. Jolly Lalan (Senior Instructor, KGV Mallappally)
Felicitation	: Dr. Jinsu Varghese (Head, Department of Zoology) Mr. Shīnu Koshy (IQAC Co-ordinator)
Vote of Thanks	: Mr. Job Liyo (President, Zoology Association)
	TRAINING SESSION 10.30 a.m. - 3.30 p.m.
Day 2 (15.10.2024)	TRAINING SESSION 9.30 a.m. - 3.30 p.m.
Day 3 (16.10.2024)	TRAINING SESSION 9.30 a.m. - 1.00 p.m. EVALUATION & VALEDICTORY SESSION 2.00 p.m. - 3.00 p.m. **National Anthem**







St Thomas College, Kozhencherry

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WOMEN'S CELL

INTERNAL QUALITY ASSURANCE CELL (IQAC) &

POSTGRADUATE AND RESEARCH DEPARTMENT OF ZOOLOGY

in association with

KHADI GRAMODYOG VIDYALAYA, MALLAPPALLY

(KHADI & VILLAGE INDUSTRIES COMMISSION, GOVERNMENT OF INDIA)

Certificate Course in Bee Keeping

Date: 14th - 16th October 2024 | Venue: Prof. T.M. Joseph Seminar Hall

Attendance List

Sl. No.	Name of the participant	Designation & Address	Signature		
			14.10.2024	15.10.2024	16.10.2024
1	Athira Rajesh	DC I B.Sc. (Honours) Zoology			
2	Anaswara Satheesh	DC I B.Sc. (Honours) Zoology			
3	Linta Susan John	DC I B.Sc. (Honours) Zoology			
4	Lakshmi Arun	DC I B.Sc. (Honours) Zoology			
5	Preethi R	DC I B.Sc. (Honours) Zoology			
6	Merlin Jacob	DC I B.Sc. (Honours) Zoology			
7	Sreejith V Kumar	DC I B.Sc. (Honours) Zoology			
8	Anayraj T	DC II B.Sc. Zoology			
9	Ansu Ann Mathews	DC II B.Sc. Zoology			
10	Anushka David	DC II B.Sc. Zoology			
11	Gabria Eldhose	DC II B.Sc. Zoology			
12	S. Saraswathi Devi	DC II B.Sc. Zoology			
13	Devika S	DC II B.Sc. Zoology			

14	Hanna Ajayan	DC II B.Sc. Zoology			
15	Anagha K.	PG I M.Sc. Zoology			
16	Anavadhya N.	PG I M.Sc. Zoology			
17	Anjali R.	PG I M.Sc. Zoology			
18	Aswani A.V.	PG I M.Sc. Zoology			
19	Risva T.K.	PG I M.Sc. Zoology			
20	Vijeesh B.H.	PG I M.Sc. Zoology			

REPORT – DRIVING TRAINING COURSE

The Women's Cell of St. Thomas College, Kozhencherry, organized a comprehensive driving course for two-wheelers and four-wheelers, exclusively for the students and staff of the college. The initiative aimed to empower participants with essential driving skills, instill confidence, and promote road safety awareness.

The course was inaugurated on 23-10-2024 at 3.30 p.m. in the College Ground by the principal-in-charge of the day, Dr. Saramma Varghese, who flagged off the first training session. In the augural address, the Principal emphasized the importance of self-reliance and skill development for personal and professional growth.

The training program was conducted in collaboration with Bethel Driving School, Kozhencherry, a reputed driving institute known for its experienced trainers and hands-on learning approach. The sessions included both theoretical and practical components, covering traffic rules, vehicle maintenance, defensive driving techniques, and hands-on driving practice.

A total of 20 participants enthusiastically joined the course, comprising both students and staff members.

The Women's Cell looks forward to organizing more such empowering initiatives in the future, fostering growth and independence among the college community.

The driving training course under the Women's Cell has proven to be a resounding success, equipping college students with vital life skills and fostering a culture of confidence and independence. The achievement of licenses for both two-wheelers and four-wheelers by all participants stands as a testament to the effectiveness of the program and the potential of such initiatives to drive social change.

A significant achievement of this program is that all participating students successfully cleared the necessary tests for obtaining their Learners' Licenses and subsequently, their permanent Driving Licenses for both two-wheeler and four-wheeler categories.



Dr. Prathibha Vasudevan

Women's Cell Secretary



WOMEN'S CELL- DRIVING TRAINING CLASS- LIST OF STUDENTS

Sl.No.	Name	Department	Class	WhatsApp Number	Your Driving Course selection:	Driving Course	Time selected
1	Aiswarya Nandan	Commerce	Bcom DC2	9544797721	Two wheeler	Four wheeler	3.30 p.m. to 4.30 p.m.
2	Aswathy Soman	Chemistry		9958760509	Two wheeler	Four wheeler	3.30 p.m. to 4.30 p.m.
3	Anjana Raj	Chemistry	Dc2	7902621534	Two wheeler	Four wheeler	3.30 p.m. to 4.30 p.m.
4	S. Saraswathi Devi	Zoology	Dc2	7902200626	Two wheeler	Four wheeler	3.30 p.m. to 4.30 p.m.
5	Divya LR	Library	library	8590303590		Four wheeler	8 a.m. to 9 a.m.
6	Devika s	Zoology	Dc2	8113814403	Two wheeler	Four wheeler	3.30 p.m. to 4.30 p.m.
7	Sneha P M	Zoology	Dc3	9207153481	Two wheeler	Four wheeler	8 a.m. to 9 a.m.
8	Sreya mariam gigi	Zoology	Dc3	7306846787	Two wheeler		8 a.m. to 9 a.m.
9	Praveena Pramod	Commerce	Mcom	8714882534	Two wheeler	Four wheeler	8 a.m. to 9 a.m.
10	Anjana Raj	Chemistry	Dc2	7902621534	Two wheeler	Four wheeler	3.30 p.m. to 4.30 p.m.
11	Meera M Mohan	Malayalam	DC-1	9400056175	Two wheeler		3.30 p.m. to 4.30 p.m.
12	Jayalekshmi Rajesh	Malayalam	Dc-1	6235955907	Two wheeler		3.30 p.m. to 4.30 p.m.
13	Aswathy Soman	Chemistry	DC2	9958760509	Two wheeler	Four wheeler	3.30 p.m. to 4.30 p.m.
14	MEKHA JAYAN	Physics	M.Sc	9778792470	Two wheeler	Four wheeler	3.30 p.m. to 4.30 p.m.
15	Adithya. V P	Physics	DC2	9497523165	Two wheeler	Four wheeler	8 a.m. to 9 a.m.
16	Manupriya M	Botany	DC 3	8086657858	Two wheeler	Four wheeler	3.30 p.m. to 4.30 p.m.
17	Reshmi Raj E R	Botany	Dc3	9747789030	Two wheeler	Four wheeler	3.30 p.m. to 4.30 p.m.
18	Aiswarya Rajeev	Malayalam	Dc 1	9746127301	Two wheeler	Four wheeler	3.30 p.m. to 4.30 p.m.
19	Athira Thampi	Zoology	DC3	8078015174		Four wheeler	3.30 p.m. to 4.30 p.m.
20	M.K Mridula	Zoology	Dc3	7559052669	Two wheeler	Four wheeler	3.30 p.m. to 4.30 p.m.



Indian Union Driving Licence
Issued by KERALA

KL03 2025000061

Issue Date: 13-01-2025 Validity (NT): 14-07-2044



Name : ATHIRA THAMPI

Date Of Birth : 15-07-2004 Blood Group: O+
Son/Daughter/Wife of : THAMPI KUTTAN

Address: KALATHITHOTTATHIL,
MANJINIKKARA MATHOOR P O CHENNEERKARA,
Kozhanchery,Pathanamthitta,KL 689647

Holder's Signature

Organ Donor :No

Date Of First Issue: 13-01-2025

DL No: KL03 2025000061

ADPVEH No.(Regn.Numbers)

Hazardous validity Hill Validity

Class of Vehicle	Code	Issued by	Date of Issue	Vehicle Category	Badge Number	Badge issued date	Badge Issued By
	LMV	KL03	13-01-2025	NT			

Emergency Contact Number: 81

Licensing Authority: RTO,PATHANAMTHITTA

Indian Union Driving Licence
Issued by KERALA

KL03 2025000066

Issue Date: 13-01-2025 Validity (NT): 05-07-2044



Name : M K MRIDULA

Date Of Birth : 06-07-2004 Blood Group: O+
Son/Daughter/Wife of : MADHU K

Address: KALATHITHOTTATHIL,
MANJINIKKARA MATHOOR P O CHENNEERKARA,
Kozhanchery,Pathanamthitta,KL 689647

Holder's Signature

Organ Donor :No

Date Of First Issue: 13-01-2025

DL No: KL03 2025000066

ADPVEH No.(Regn.Numbers)

Hazardous validity Hill Validity

Class of Vehicle	Code	Issued by	Date of Issue	Vehicle Category	Badge Number	Badge issued date	Badge Issued By
	MCWG	KL03	13-01-2025	NT			
	LMV	KL03	13-01-2025	NT			

Emergency Contact Number: 81

Licensing Authority: RTO,PATHANAMTHITTA

Indian Union Driving Licence
Issued by KERALA

KL03 20250000129

Issue Date: 20-01-2025 Validity (NT): 24-10-2040



Name : PRAVEENA PRAMOD

Date Of Birth : 25-10-2000 Blood Group: B-
Son/Daughter/Wife of : PRAMOD P V

Address: PULINILKKUNNATHIL,
NARANGANAM-WEST P O NARANGANAM,
KOZHENCHERRY,PATHANAMTHITTA,KL 689642

Holder's Signature

Organ Donor :No

Date Of First Issue: 20-01-2025

DL No: KL03 20250000129

ADPVEH No.(Regn.Numbers)

Hazardous validity Hill Validity

Class of Vehicle	Code	Issued by	Date of Issue	Vehicle Category	Badge Number	Badge issued date	Badge Issued By
	MCWG	KL03	20-01-2025	NT			
	LMV	KL03	20-01-2025	NT			

Emergency Contact Number: 81

Licensing Authority: RTO,PATHANAMTHITTA

Detailed Report on Skill Development Courses for Women Students

Conducted by Women's Cell, St Thomas College, Kozhencherry

In Association with Khadhi Gramoday Vidhyalaya, Mallappally

The Women's Cell of St Thomas College, Kozhencherry, in collaboration with Khadhi Gramoday Vidhyalaya, Mallappally, has organized a series of skill development courses aimed at empowering women students through practical and employment-oriented training. These courses are designed to enhance self-employment opportunities, foster entrepreneurship, and equip participants with valuable life skills.

The key objectives behind organizing these Skill Development Courses were:

- To impart practical, vocational skills in tailoring and beautician services to women students.
- To promote self-employment and entrepreneurial opportunities among the participants.
- To enhance the economic independence and social empowerment of women students.
- To provide certified training in collaboration with recognized vocational training institutions.
- To build confidence and offer alternative career pathways beyond traditional academic pursuits.

Courses Offered

The following skill development courses were conducted:

1. Tailoring Course

- **Duration:** 2 months
- **Fee:** ₹2000
- **Description:**
The tailoring course provided comprehensive training in basic and advanced tailoring techniques, including cutting, stitching, and designing garments. The curriculum was structured to help students gain hands-on experience using sewing machines and other tailoring tools.
- **Instructors:** Experienced trainers from Khadi Gramodyog Vidyalaya, Mallappally, guided the students through each module.
- **Outcome:**
Participants successfully completed various tailoring projects, including making dresses, blouses, and children's wear. Many students expressed confidence in starting their own tailoring units or working from home.

2. Beautician Course

- **Duration:** 2 months
- **Fee:** ₹2000
- **Description:**
The beautician course covered essential beauty and grooming skills such as skincare, hair care, makeup, and bridal makeovers. The training was delivered by experienced professionals, with practical sessions on live models.
- **Outcome:**
Students learned the latest beauty trends and techniques, enabling them to seek employment in beauty parlors or start their own home-based beauty services.
- **Instructors:** Certified beauticians and vocational trainers from Khadi Gramodyog Vidyalaya, Mallappally, delivered the practical and theoretical sessions.

All classes were conducted at Women's Cell room with access to necessary equipment and materials.

The association with **Khadi Gramodyog Vidyalaya, Mallappally**, was a cornerstone of this program's success. Their expertise in vocational training, certified instructors, and structured curriculum provided immense value. This partnership ensured:

- Access to high-quality, industry-relevant training modules.
- Provision of experienced and dedicated trainers.
- Credibility and recognition for the certificates issued upon course completion.
- Seamless coordination for material procurement and facility utilization.

A total of 7 students enrolled in the Tailoring Course and 3 students enrolled in the Beautician Course. The dedication and enthusiasm exhibited by the participants throughout the rigorous training were truly commendable.

Upon successful completion of the respective courses, all participating students received a certificate of completion from Khadi Gramodyog Vidyalaya, Mallappally, validating their newly acquired skills.

The Tailoring and Beautician Skill Development Courses, a commendable initiative by the Women's Cell in partnership with Khadi Gramodyog Vidyalaya, Mallappally, have proven to be exceptionally beneficial. They have successfully empowered women students by providing them with valuable vocational skills and fostering a spirit of entrepreneurship.



St Thomas College, Kozhencherry

Re-accredited by NAAC with A++ Grade in Fourth Cycle(CGPA 3.67/4) ♦ ISO 21001:2018 & 9001:2015 Certified

Affiliated to Mahatma Gandhi University, Kottayam www.stthomascollege.info

Established in 1953

Kozhencherry P.O., Kerala State, Pincode: 689641 Phone: +91-9497445575, 0468-2214566

വിമൻസ് സെൽ • ചാസ് ഖാദി ഗ്രാമോദ്യോഗ് വിദ്യാലയം, മല്ലപ്പള്ളി തൊഴിൽ പരിശീലന കോഴ്സുകൾ

പ്രിയമുള്ളവരേ,
കേന്ദ്ര സർക്കാരിന്റെ എം എസ് എം ഇ മന്ത്രാലയത്തിന്റെ കീഴിൽ ഖാദി ഗ്രാമവ്യവസായ കമ്മീഷന്റെ അംഗീകാരത്തോടെ പ്രവർത്തിക്കുന്ന മല്ലപ്പള്ളി ചാസ് ഖാദി ഗ്രാമോദ്യോഗ് വിദ്യാലയത്തിന്റെയും കോഴഞ്ചേരി സെന്റ് തോമസ് കോളേജ് വിമൻസ് സെൽ സ്കിൽ ഡെവലപ്മെന്റ് സെന്ററിന്റെയും സഹായകത ആഭിമുഖ്യത്തിൽ സ്റ്റൈപ്പന്റഡ് ഡോക്യുമെന്റേഷനും അല്ലാത്തതുമായ വിവിധ തൊഴിൽ പരിശീലന കോഴ്സുകൾ നടത്തുന്നു.

കോഴ്സുകൾ വിജയകരമായി പൂർത്തിയാക്കുന്നവർക്ക് ലഭിക്കുന്ന നേട്ടങ്ങൾ :

1. കേന്ദ്ര സർക്കാരിന്റെ അംഗീകൃത സർട്ടിഫിക്കറ്റ്
2. ചാസിന്റെ വിവിധ സ്ഥാപനങ്ങളിൽ ജോലി
3. സ്വയംതൊഴിൽ ആരംഭിക്കാൻ 50 ലക്ഷം രൂപവരെ PRIME MINISTER'S EMPLOYMENT GENERATION PROGRAMME വഴി 35% വരെ സബ്സിഡിയോടുകൂടിയ വായ്പ.

*ലിംഗഭേദമില്ലാതെ എല്ലാ വിദ്യാർത്ഥികൾക്കും ഈ കോഴ്സുകളിൽ പ്രവേശനമുണ്ടായിരിക്കുന്നതാണ്,

**ഒരു കോഴ്സിൽ കുറഞ്ഞത് 25 വിദ്യാർത്ഥികൾ ഉണ്ടായിരിക്കണം.

	തയ്യൽ പരിശീലനം 2 മാസം, 1000 രൂപ		മെഴുകുതിരി നിർമ്മാണം 3 ദിവസം, 300 രൂപ
	ബ്യൂട്ടിഷൻ കോഴ്സ് 2 മാസം, 2000 രൂപ		തേനിച്ച വളർത്തൽ 3 ദിവസം, 300 രൂപ
	ബേക്കറി പരിശീലനം 5 മണിക്കൂർ, 500 രൂപ		പേപ്പർ ബാഗ് നിർമ്മാണം 3 ദിവസം, 300 രൂപ
	പഴവർഗ്ഗ സംസ്കരണം 5 മണിക്കൂർ, 500 രൂപ		കൂട നിർമ്മാണം 3 ദിവസം 300 രൂപ
	ഖാദി നെയ്ത്ത് 6 മാസം സൗജന്യ പരിശീലനം 3000 രൂപ സ്റ്റൈപ്പന്റഡ്		സോപ്പ്-ഡിറ്റർജന്റ് നിർമ്മാണം 3 ദിവസം, 300 രൂപ

താൽപര്യമുള്ള വിദ്യാർത്ഥികൾ 2025 ജനുവരി 3നു മുൻപ് റെജിസ്റ്റർ ചെയ്യേണ്ടതാണ്

ഡോ. ജോർജ്ജ് കെ അലക്സ്
(പ്രിൻസിപ്പൽ)

ഡോ. സനേഹ ജോർജ്ജ് പച്ചയിൽ
(പ്രസിഡന്റ്)

ഡോ. പ്രതിഭ വാസുദേവൻ
(സെക്രട്ടറി)



കൂടുതൽ വിവരങ്ങൾക്ക്: 9447278595, 9496756070

റെജിസ്റ്റർ ചെയ്യൂ

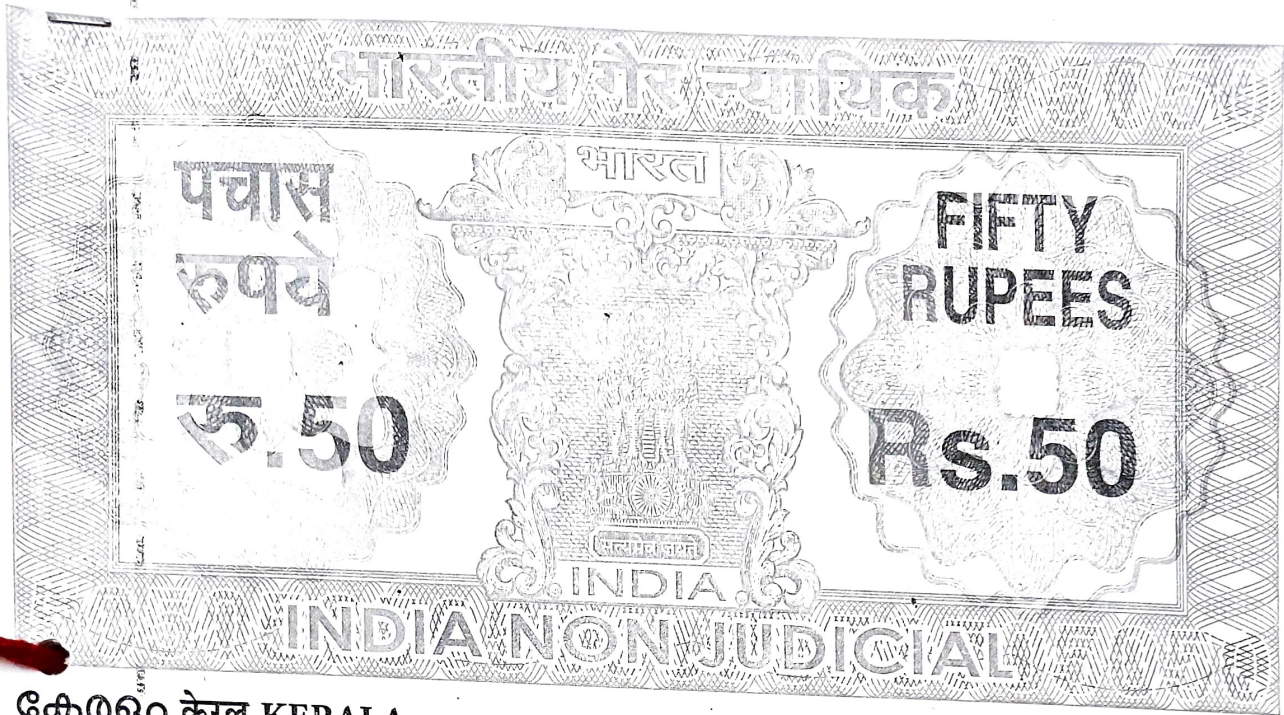
List of Students- Tailoring Course

1. Adithya V. P.
2. Simple S
3. Devipriya Pradeep
4. Varsha Mary varghese

List of Students- Beautician Course

1. Mekha G
2. Daya Krishnan
3. Alfitha Shanas





കേരളം കേരल KERALA

CZ 025699

YOUTH EMPLOYABILITY SKILL TRAINING

(युवा रोजगार कौशल प्रशिक्षण)

NATIONAL SKILL DEVELOPMENT CORPORATION (NSDC)

(Accreditation and Affiliation TP ID: 144430)

Registered under Central Co-operative Registrar, Government of India, New Delhi.

Youth Skill Development Project, A Govt Grant-in-aid Autonomous Education and Training Institution

MINISTRY OF MICRO, SMALL AND MEDIUM ENTERPRISES (PPDC) AGRA
(Technology Development Centre)

REGIONAL ADMINISTRATIVE OFFICE AND EXTENSION TRAINING CENTRE

5th FLOOR, REVENUE TOWER, ADOOR, PATHANAMTHITTA DIST.

PHONE: 04734 - 227005 / 292905, MOB: 83308 43305

Email: youthskilltrainingcooperatives@gmail.com, Website: www.nationalyouthprogramme.in

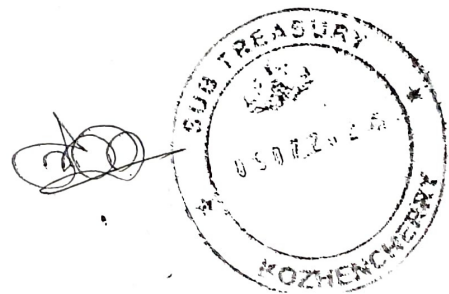


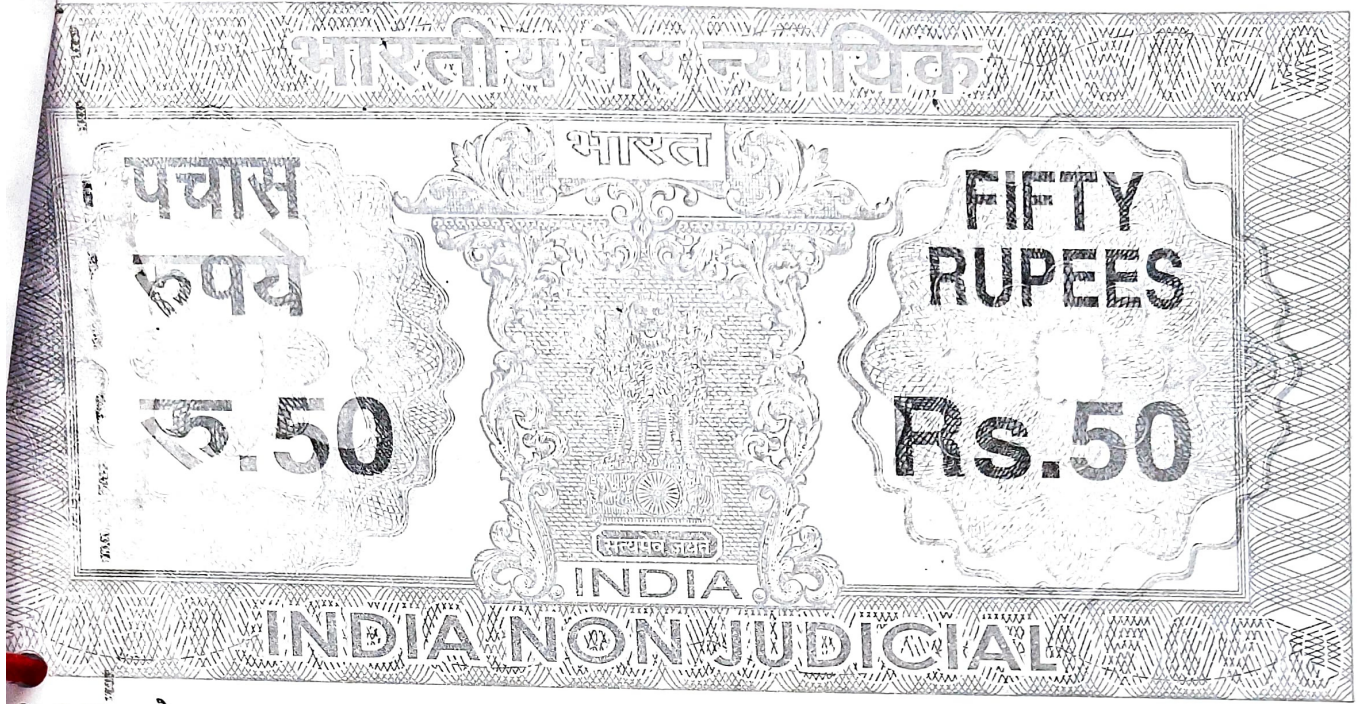
YOUTH EMPLOYABILITY SKILL TRAINING (MSCS Act 2002)

&

ST. THOMAS COLLEGE KOZHENCHERRY

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9324
(2) (10/11/2016)
St. Thomas College
Kozhicherry





കറളം കേരल KERALA

CZ 025701

In accordance with a mutual desire to build up scientific and technical interaction and collaboration between **YOUTH EMPLOYABILITY SKILL TRAINING, ADOOR** and **ST.THOMAS COLLEGE KOZHENCHERRY** the above mentioned both parties agree to commence studies towards certain **Add On Course**.

AIM:

Students could earn more than one qualification without wasting much time. Employment opportunities will be widened. Students will get exposure to new courses in trend. Helps the students in keeping up with the advancements in the field of learning.

Handwritten signature and text:
To
St. Thomas College
K. O. I. 1.

Handwritten signature



This Agreement has been signed between two parties below and will be valid from 25th NOVEMBER 2024 to 24th NOVEMBER 2025.

**Youth Employability Skill Training
(MSCS Act 2002) Adoor**

**ST. THOMAS COLLEGE,
Kozhencherry**

[Signature]
Chief Executive Officer/Regional Officer

Dr. SARATH S NAIR

**Regional Director / Project Officer
Regional Project Office &
Extension Training Centre
Youth Employability Skill Training Project
National Youth Programme
youthskilltrainingcooperatives@gmail.com
Ph: 04734 227005, 292905**

[Signature]
Principal

Dr. GEORGE K ALEX

**Dr. George. K. Alex
Principal in Charge
St. Thomas College
Kozhencherry
PFN:467786**



ST THOMAS COLLEGE KOZHENCHERRY
DEPARTMENT OF CHEMISTRY
CERTIFICATE COURSE IN
FOOD SCIENCE AND QUALITY CONTROL
SYLLABUS

Total Duration-30 Hours

UNIT I - BASICS OF FOOD SCIENCE (4Hrs)

Definition of Food and Food Science, Classification of Foods based on Functions, Food groups and Food pyramid, Balanced Diet, Composition and nutritive value of various food items.

UNIT II- PRINCIPLES OF NUTRITION (5Hrs)

Definition of Energy; Carbohydrates- Functions; Proteins- functions, essential amino acids; Lipids and Water- Functions; Minerals- Micro and macro minerals- functions, deficiency and toxicity; Vitamins- classification, functions and deficiency. Nutrition during Pregnancy, Childhood and Adolescence.

UNIT III - CHEMISTRY OF FOODS, EDIBLE OILS AND BEVERAGES (8Hrs)

Denaturation of Proteins, enzymatic and non-enzymatic browning reaction in foods, rancidity – types and prevention. Fats, oils. Saturated and unsaturated fatty acids - Role of MUFA and PUFA in preventing heart diseases, saponification value, Iodine Value, and their significance.

Beverages - alcoholic and non- alcoholic beverages. Addiction to alcohol

UNIT IV -FOOD SAFETY & QUALITY CONTROL (8 Hrs)

Principles of Quality control of food –Raw material control, processed control and finished product inspection; Food adulteration - definition, types of adulteration in various foods, Common adulterants in foods and tests to detect adulterants. Food additives, flavours, colours, leavening agents, emulsifiers, taste makers.

PRACTICAL - (5Hrs)

Analysis of intentional adulteration in food items (milk, ghee, powders etc)

Analysis of pesticides in vegetables.

Estimation of Acidity in fruit juice.

Estimation of Iron content in various food items.

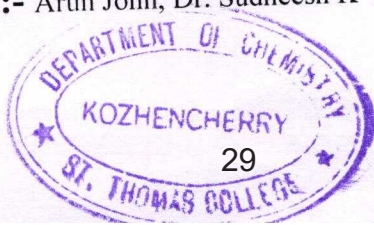
Determination of Vitamin C content in fruit juices

References:

- 1.Swaminathan M., Food Science and Experimental Foods, Ganesh And Company.
- 2.Srilakshmi, B., Nutrition Science, New Age International (P) Ltd., New Delhi, 2017.
- 3.Chandrashekar, U.2002. Food Science and Applications in Indian Cookery. Phoenix Publishing House.
- 4.Food safety and standards authority of India. Ministry of Health and Family Welfare, Government of India.

Course Coordinator :- Arun John, Dr. Sudheesh K V

Dr. George. K. Alex
Principal in Charge
St. Thomas College



Arun John

HEAD
Department of Chemistry
St. Thomas College
Kozhencherry - 689 641

**Post Graduate & Research Department of Botany
St. Thomas College, Kozhencherry.**

Certificate Course
in
MUSHROOM CULTIVATION



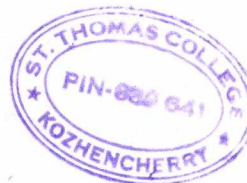
Ms. Adheena Elza Johns
Course Coordinator



Dr. Leena Abraham
Head
Dept. of Botany



Dr. George K. Alex
Principal in Charge
St. Thomas College
Kozhencherry
PEN:487786



Certificate Course
in
MUSHROOM CULTIVATION

COURSE OVERVIEW

Commercial mushroom cultivation in India has started recently and its popularity has increased day by day. Mushroom cultivation has now become a business which is export oriented. The present health-conscious generation is very much interested to include mushrooms in their diet due to their nutritive and health benefits. As mushrooms are rich in protein, the vegetarians prefer to eat mushrooms instead of meat and chicken. Mushrooms can grow naturally and in a room with controlled temperature in waste material and also fetches a good price in market. Mushroom cultivation options for income and employment generation for educated youth and women without any major arable resources. The course deals with importance of mushrooms, different types of mushrooms, spawn production, cultivation methods. This syllabus provides a holistic perspective to the entrepreneurship skill development in mushroom cultivation.

COURSE OBJECTIVES

- To provide basic information about mushrooms and its cultivation
- To become aware of various scientific aspects of mushroom cultivation
- To enable the students to be aware of the advantages of using mushroom cultivation as microenterprise
- To become aware of the various value-added products from mushroom

PEDAGOGY

- Lectures
- Demonstrations
- Hands on training
- Practical sessions
- Creative Assignments
- Farm visits



COURSE OUTCOME

- Familiarization of different mushrooms and cultivation of different types of mushroom
- Provide basic information for adopting mushroom cultivation as a business opportunity
- Acquire ability initiating mushroom based microenterprises.
- To undertake mushroom cultivation as hobby/career
- Acquiring ability for the preparation of mushroom based value-added products

COURSE STRUCTURE

S. No	Modules	Time allotted (Hours)
1	Introduction to mushrooms	3
2	Economic importance of mushroom	2
3	Agri-preneurship aspects of mushrooms	2
4	Mushroom cultivation	4
5	Spawn production	4
6	Common pests and control measures	2
7	Post-harvest care and techniques	3
8	Practical	10
		30 hours



SYLLABUS

Module 1- Introduction to mushrooms (3 hours)

History of mushroom cultivation, Morphology of mushrooms, Different types of mushrooms, Identification of edible and poisonous mushrooms. Common edible mushrooms-white button mushroom, paddy straw mushroom, oyster mushroom, milky mushroom.

Module 2-Economic importance of mushroom (2 hours)

Nutritive value of mushrooms. Medicinal importance, Value Added Products.

Module 3-Agri-preneurship aspects of mushroom (2 hours)

Marketing of mushrooms, Export potential of mushrooms. General guidelines for establishment of a home scale processing unit.

Module 4-Mushroom cultivation (4 hours)

Infrastructure -Mushroom house: structure, precautions taken to maintain humidity and hygiene.

Steps involved: Substrate preparation- Substrate selection, Substrate soaking and Sterilization, Bed Preparation- Bagging and Spawning, Incubation and Harvesting. Cultivation of White Button, Paddy Straw, Oyster, and Milky mushroom

Module 5-Spawn production (4 hours)

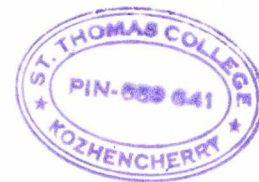
Infrastructure for spawn production, Preparation of spawn substrate, Preparation of pure culture, Culture media for raising pure culture, Culture maintenance, spawn preparation, storage and marketing

Module 6-Common pests and control measures (2 hours)

Fungal diseases of mushroom and control measures -Soft mildew, Brown plaster mold, Dry Bubble, Dry Truffle Diseases due to Trichoderma. Bacterial diseases of mushroom and control measures- Brown Blotch or Bacterial spot. Pest of mushroom and its management.

Module 7-Post harvest care and techniques (3 hours)

Post-harvest technology- Storage, Transporting and Marketing of Mushrooms. Mushroom processing - Canning of mushroom, Dehydration of mushroom, Packing of mushroom.



Practical (10 hours)

- Spawn production
- Preparation of PDA medium
- Isolation of pure culture
- Preparation of mother spawn, sub culturing
- Cultivation of Oyster and Milky mushroom

REFERENCE

1. Chang S.T. and Hayes W.A. (1978) The Biology and Cultivation of Edible Mushrooms. Academic Press Inc.
2. Chauhan N.M. Scientific Cultivation of Mushrooms
3. Krieger L. C. C., (1947) A Guide to the Mushrooms - Asiatic Publishing House.
4. Marshall N. L. (1910) The mushroom Book, Double Day Page & Company 1910.
5. Mishra S. R., (2014) Techniques of Mushroom cultivation Discovery Publishing House Ltd
6. NIIR Board (2011) Handbook on Mushroom Cultivation and Processing, Asia Pacific Business Press Inc.
7. Sharma O. P., (1989) Fungi and Allied Microorganisms McGraw Hill Education (India) Pvt Ltd.
8. Singh S. K. and Jha P. K., Mushroom (2014) -Production and Utilization, Scientific Publishers, Jodhpur.
9. Stamets P. (2000) Growing gourmet and Medicinal Mushroom.



St. Thomas College, Kozhencherry

POSTGRADUATE & RESEARCH DEPARTMENT OF ZOOLOGY

Certificate course in

ORNAMENTAL FISH CULTURE & AQUARIUM MANAGEMENT

Total: 30 hours

Module 1: Introduction to Ornamental fish culture (5 hrs)

Basic requirements of ornamental fish culture, scope & potential, Trends in ornamental fish farming in India, Identification of different types of ornamental fishes- freshwater & marine Shrimps, crabs & lobsters, Selection of ornamental fishes- herbivores, omnivores, carnivores; fishes used in a community aquarium

Module 2: Aquarium Management (5 hrs)

Aquarium tanks & accessories, setting of a tank, maintenance of aquarium, Water quality parameters- pH, temperature, O₂, ammonia, Aquarium plants; control of algae- physical & biological

Module 3: Ornamental fish breeding & rearing (10 hrs)

Breeding behaviour & preparation for breeding, Breeding & rearing of livebearers (guppy, platy, swordtail, molly), Breeding & rearing of egg layers (goldfish, angel fish, betta, gourami, zebra fish, tetras)

Module 4: Ornamental fish food & feeding (3 hrs)

Food & feeding for larva, fry & adult; live feeds & artificial feeds, live food culture

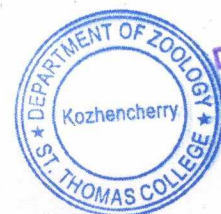
Module 5: Fish diseases and their management (2 hrs)

Common bacterial, viral, fungal, protozoan & crustacean infections; prevention & treatment

Module 6: Group activity (5 hrs)

Setting up of an aquarium

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1. Baradach, J.E., Ryther, J.H. and Mc Larney (1972). Aquaculture. The Farming and Husbandry of Freshwater and Marine Organisms. Wiley Interscience, New York.
2. Beazley, M. (1998). The complete guide to tropical aquarium fish care. Read and Consumes book Ltd. London.
3. Jameson, J.D. and Santhanam, R. (1996). Manuel of ornamental fisheries and farming technology. Fisheries college and Research Institute, Thoothukudi
4. Jhingran, A.V.G. (1991). Fish and Fisheries of India. Hindustan Publishing Co.
5. Rath, R.K. (2000). Freshwater Aquaculture. Scientific Publishers (India). Jodhpur.



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DEPARTMENT OF PHYSICS-ST THOMAS COLLEGE KOZHENCHERRY
CERTIFICATE COURSE IN DISASTER MANAGEMENT (CREDIT-2, MARKS-50)

Objectives of the Course

1. To provide basic conceptual understanding of disasters.
2. To understand approaches of Disaster Management
3. To build skills to respond to disaster

Course Outline

UNIT: I DEFINITION AND TYPES OF DISASTER (8 HOURS)

Hazards and Disasters, Risk and Vulnerability in Disasters, Natural and Man-made disasters, earthquakes, floods drought, landside, land subsidence, cyclones, volcanoes, tsunamis, avalanches, global climate extremes. Man-made disasters: Terrorism, gas and radiations leaks, toxic waste disposal, oil spills, forest fires.

UNIT: II STUDY OF IMPORTANT DISASTERS (10 Hours)

Earthquakes and its types, magnitude and intensity, seismic zones of India, major fault systems of India plate, flood types and its management, drought types and its management, landside and its managements case studies of disasters in Sikkim (e.g) Earthquakes, Landside). Social Economics and Environmental impact of disasters.

UNIT: III MITIGATION AND MANAGEMENT TECHNIQUES OF DISASTER (6 Hours)


Basic principles of disasters management, Disaster Management cycle, Disaster management policy, National and State Bodies for Disaster Management, Early Warning Systems, Building design and construction in highly seismic zones, retrofitting of buildings.

UNIT IV TRAINING, AWARENESS PROGRAM AND PROJECT ON DISASTER MANAGEMENT (6 Hours)

Training and drills for disaster preparedness, Awareness generation program, Usages of GIS and Remote sensing techniques in disaster management, Mini project on disaster risk assessment and preparedness for disasters with reference to disasters in Kerala and its surrounding areas.

Text Books:

1. Disaster Management Guidelines, GOI-UND Disaster Risk Program (2009-2012)
2. Damon, P. Copola, (2006) Introduction to International Disaster Management, Butterworth Heineman.
3. Gupta A.K., Niar S.S and Chatterjee S. (2013) Disaster management and Risk Reduction, Role of Environmental Knowledge, Narosa Publishing House, Delhi.
4. Murthy D.B.N. (2012) Disaster Management, Deep and Deep Publication PVT. Ltd. New Delhi.
5. Modh S. (2010) Managing Natural Disasters, Mac Millan publishers India LTD.


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