MEDHAVI SKILLS UNIVERSITY

Skill • Empower • Liberate

REPORT ON SUSTAINABLE DEVELOPMENT



2 ZERO HUNGER



GOAL 2

Introduction

Sustainable Development Goal 2 (SDG 2): Zero Hunger aims to end hunger, achieve food security, improve nutrition, and promote sustainable agriculture. Access to adequate, nutritious, and affordable food is essential for individual well-being, educational development, and a sustainable society. Higher education institutions can contribute to this goal by promoting nutritional awareness, supporting student welfare, encouraging responsible food consumption, and engaging with communities to address food insecurity.

Medhavi Skills University, Sikkim, recognises the importance of food security and nutrition in fostering an inclusive, supportive, and sustainable learning environment. Through its educational activities, student support initiatives, community engagement, awareness programmes, and collaborations with relevant stakeholders, the University can contribute to promoting healthy food practices and strengthening awareness of hunger-related challenges.

This report presents a framework for documenting the University's contributions towards SDG 2, focusing on relevant policies, programmes, activities, partnerships, and supporting evidence. It covers key areas such as campus food waste management, student and staff food security, access to healthy and affordable food, sustainable food choices, and community engagement in food security and sustainable agriculture, wherever applicable. Through systematic documentation of these initiatives, Medhavi Skills University aims to demonstrate its role in promoting nutritional well-being, responsible food practices, and the broader objectives of Zero Hunger.

University website: https://www.msu.edu.in/

Research Contribution for SDG 02

For SDG 02, Medhavi University contributes to food security, nutrition and healthier food choices through research on food product development, alternative protein sources and the nutritional value of locally available crops and plants. The research focuses on developing nutritious food products using natural ingredients, improving dietary quality and exploring plant-based alternatives to conventional protein sources.

The university's research includes the development of fibre- and antioxidant-rich nachos using citrus fruits and low-glycemic, high-fibre sevaiyyan prepared from cucumber and buckwheat flour. These studies explore the nutritional quality and acceptability of healthier food products. Research on vegan meat as an alternative protein source also examines options for meeting dietary protein requirements.

Other supporting studies explore the nutritional and health benefits of Moringa and Eastern Himalayan plants, along with the role of micronutrients in clinical nutrition. Collectively, these research contributions support the broader objectives of SDG 02 by promoting nutritional awareness, healthier food options and the use of plant-based food resources.

List of Papers and contributions for SDG 02: Zero Hunger

- **Fiber- and antioxidant-rich nachos from citrus fruits** (*Citrus limon*, *C. sinensis*, *C. aurantiifolia*). The study covers product development, nutritional quality and sensory evaluation. It ranks the products with multi-criteria decision-making methods (MAHP and TOPSIS). Published in *Annals of Agri Bio Research* (Debasrita Banerjee).

- **Low-glycemic, high-fiber sevaiyyan from cucumber and buckwheat flour**, designed for diabetic and obese consumers. It uses buckwheat, a traditional Himalayan crop, to build a healthier staple food. Also ranked with MAHP/TOPSIS. Published in *Annals of Agri Bio Research* (Debasrita Banerjee).

- **Vegan meat as an alternative protein source in chronic kidney disease**, a narrative review. It addresses protein nutrition and sustainable alternative proteins. Published in *Discover Food* (Debasrita Banerjee).

- **Moringa oleifera in hypertension management**, a systematic literature review. Moringa is a nutrient-dense crop, so the paper links food-based and plant-based approaches to health outcomes. Published in *Annals of Agri Bio Research* (Debasrita

Banerjee).

- **Antidiabetic potential of Eastern Himalayan plants** (Divya Pradhan, *Int. J. Enhanced Research in Science, Technology & Engineering*). It documents regional plant biodiversity and its dietary and health value.
- **Role of micronutrients in perioperative care**, a systematic review (Ravi Yadav and Debasrita Banerjee, *Indian Journal of Critical Care Medicine*). It addresses nutrition, but in a clinical setting.
- **Financial inclusion and microenterprise sustainability in rural development** (Snehasish Bhattacharjee, *IJSE*). It relates to Target 2.3 (incomes of small-scale producers) only if the study covers agri-based microenterprises, which should be checked.

Summary Statement

Medhavi Skills University's faculty contribute to SDG 02 through research on functional and nutrient-rich foods, healthier food product development and alternative plant-based protein sources. The research includes the development of fibre- and antioxidant-rich products using citrus fruits and low-glycemic, high-fibre food products using cucumber and buckwheat flour. These studies focus on improving food quality, nutritional value and promoting healthier dietary choices. Additional research on Moringa and Eastern Himalayan plants explores their nutritional and health benefits. Collectively, these research activities support food and nutrition awareness, encourage the use of natural food resources and contribute to the development of healthier and more sustainable food options.

Courses Related to Nutrition, Food Security and Healthy Lifestyles

The University integrates nutrition-related learning into its academic programmes to promote awareness of healthy lifestyles, nutritional well-being, and the relationship between nutrition and health. The University offers courses such as ***Nutrition and Lifestyle Management***, ***Renal Nutrition – Concept***, **and** ***Food Science and Nutrition*** across programmes under the School of Health Science and Technology and the School of Hospitality and Tourism.

These courses are relevant to Sustainable Development Goal 2 (SDG 2) – Zero Hunger, particularly through their focus on nutrition awareness, dietary management, healthy food practices, and the importance of adequate nutrition for overall well-being. Including nutrition-related subjects in healthcare programmes helps students understand nutritional considerations in patient care and health management, while food science and nutrition education in hospitality and tourism supports knowledge of food quality, nutrition, and responsible food practices.

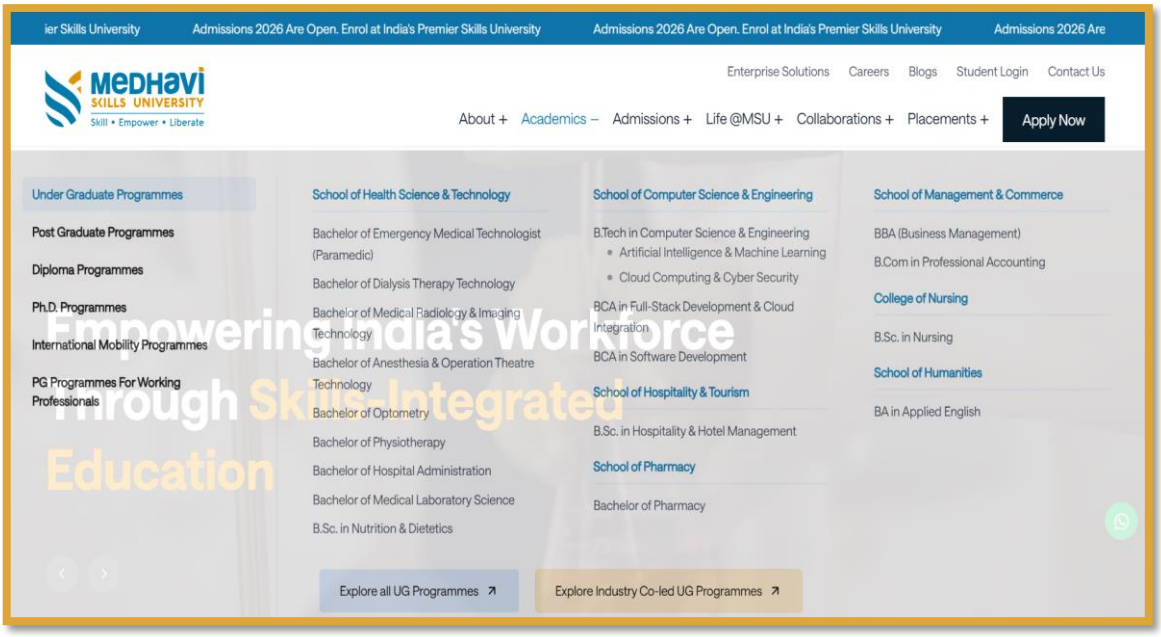
The courses listed below demonstrate the integration of nutrition-related education into the University's curriculum. By incorporating these subjects as core and programme elective courses, Medhavi Skills University provides students with opportunities to develop knowledge and skills relevant to nutritional health and well-being. These academic offerings contribute to SDG 2-related education, while broader claims concerning food security, hunger alleviation, and sustainable agriculture should be supported by additional evidence of relevant programmes and activities.

List of Courses

S. No.	Name of the Programme	Department	School	Name of the Course/Subject
1	B.Sc. in Medical Laboratory Technology	Medical Laboratory Technology	School of Health Science and Technology	Nutrition and Lifestyle Management
2	Bachelors in optometry	Optometry	School of Health Science and Technology	Nutrition and Lifestyle Management
3	Bachelor of Physiotherapy	Physiotherapy	School of Health Science and Technology	Nutrition and Lifestyle Management
4	B.Sc. in Operation	Operation Theatre	School of Health Science and	Nutrition and Lifestyle

	Theatre Technology	Technology	Technology	Management
5	B.Sc. in Emergency Medical Technology	Emergency Medical Technology	School of Health Science and Technology	Nutrition and Lifestyle Management
6	B.Sc. in Dialysis Technology	Dialysis Technology	School of Health Science and Technology	Renal Nutrition – Concept
7	B.Sc. in Dialysis Technology	Dialysis Technology	School of Health Science and Technology	Nutrition and Lifestyle Management
8	B.Sc. in Hospitality and Tourism Management	Department of Hospitality and Tourism Management	School of Hospitality and Tourism	Food Science and Nutrition





Campus Food Waste Management – Medhavi Skills University

The University promotes responsible food preparation, handling and consumption through its hospitality and food-related learning activities. The university provides practical exposure to students in food preparation, purchasing, cooking and serving through its hospitality training facilities and student-operated restaurant activities. These activities provide opportunities to understand food resource management and reduce unnecessary wastage.

The university also conducts awareness activities on food preservation and processing techniques, highlighting the importance of proper food storage, preservation and responsible use of food resources. Such initiatives encourage students to develop responsible food-handling practices and contribute to reducing food loss and wastage. Further strengthening these efforts through regular food-waste measurement, record keeping, segregation and appropriate treatment can support sustainable campus food management.

Hospitality Students Serve Up Success in Inaugural Restaurant Launch

Students studying B.Sc. Hospitality and Hotel Management as their vocational elective at Medhavi Skills University inaugurated the university restaurant. The students put their skills and knowledge to the test as they ran the restaurant for the lunch service with minimal involvement from the faculty.

The students were completely in charge of the operations, from indenting and purchasing to setting up the restaurant, cooking, and serving their guests. The result was a fantastic turnout, with the students showing their immense enthusiasm and hard work paying off.

The lunch service was a huge success, with guests raving about the delicious food and excellent service provided by the students. The students expressed their happiness and satisfaction with the results of their hard work, and the faculty couldn’t be more proud of them.

This event was a true testament to the skills and knowledge that the students have acquired through their studies at Medhavi Skills University and a shining example of what can be achieved when hard work and determination meet. The university community and the guests of the restaurant are looking forward to more such opportunities to showcase the talents of the students.

https://www.msu.edu.in/blog/hospitality-students-serve-up-success-in-inaugural-restaurant-launch



Student Hunger: Student Food Insecurity and Hunger

Medhavi Skills University is committed to ensuring that no student faces barriers to education due to food insecurity or hunger. Through financial assistance, scholarships, student welfare support, counselling, and community engagement initiatives, the University seeks to support students from economically disadvantaged backgrounds and promote their well-being. These measures contribute to SDG 2 (Zero Hunger) by fostering an inclusive learning environment where students have access to the support needed for their academic and personal development.



Student Hunger Interventions

The University supports students' nutritional well-being through campus-based food services and student support mechanisms. The University provides access to hostel mess facilities, affordable meals, financial assistance, and welfare support to help ensure that students can meet their basic nutritional needs and continue their education without food-related barriers. These interventions contribute to SDG 2 (Zero Hunger) by promoting student health, well-being, and equitable access to education.

Sustainable Food Choices on Campus

The University promotes sustainable food choices on campus by encouraging healthy eating habits, balanced nutrition, responsible food consumption, and minimizing food wastage through its dining and cafeteria facilities. Through nutrition-focused courses, awareness programmes, and campus food services, the University supports SDG 2 (Zero Hunger) and fosters a culture of sustainable and healthy food practices among students and staff.

Healthy and Affordable Food Choices

The University (MSU), Sikkim, recognises the importance of access to healthy, nutritious and affordable food in promoting student well-being and supporting a healthy learning environment. The University provides campus food facilities, including a cafeteria offering a variety of cuisines, to cater to the food preferences of students and other members of the University community. These facilities provide access to food services within the campus.

The University also offers nutrition-related academic programmes, including the B.Sc. in Nutrition and Dietetics, which focuses on nutrition, dietetics, community nutrition and nutrition education. Such academic offerings contribute to developing knowledge and awareness of healthy dietary practices and the importance of balanced nutrition.

These facilities and academic initiatives are relevant to Sustainable Development Goal 2 (Zero Hunger), particularly the promotion of nutritious food choices and awareness of healthy eating.

Balanced Diet Plan

This plan balances the existing weekly menu by combining carbohydrates, protein, vegetables, fruit, dairy, healthy fats and fibre. Veg and non-veg alternatives are provided where applicable.

1. Balanced Weekly Diet

Day	Breakfast	Lunch	Snacks	Dinner
Monday	Methi Paratha + Milk + 2 Eggs / Paneer + 1 fruit	Rice + 2 Roti + Arhar Dal + Mixed Vegetable + Chicken Curry / Paneer + Salad + Curd	Tea + Roasted Chana + 1 fruit	Rice + Roti + Dal + Chicken Curry / Paneer Butter Masala + Seasonal Vegetable + Salad
Tuesday	Aloo Paratha + Curd + 2 Boiled Eggs / Paneer + 1 fruit	Rice + Roti + Moong Dal + Chana Gravy + Gobhi Bhujia + Chicken Curry / Soya + Salad	Tea + Sprouts/Chana Chaat	Rice + Roti + Arhar Dal + Mixed Vegetables + Curd
Wednesday	Idli + Sambar + Coconut Chutney + Milk + 2-Egg Omelet / Paneer + 1 fruit	Rice + Roti + Arhar Dal + Palak/Mixed Veg + Fish Fry / Paneer + Salad + Curd	Fruit + Roasted Chana	Rice + Roti + Dal + Egg Curry / Palak Paneer + Seasonal Vegetable
Thursday	2 Eggs / Paneer + 3 Bread + Milk + Banana/Apple	Rice + Roti + Dal + Gobi + Seasonal Saag + Chicken Masala / Soya-Chaner + Salad + Curd	Tea + Sprouts/Peanuts	Vegetable Pulav + Raita + Chola + Mixed Vegetable + 1 fruit
Friday	Sattu Paratha + Curd + 2 Boiled Eggs / Paneer + 1 fruit	Rice + Roti + Masoor Dal + Jackfruit + Aloo Bhaji + Egg Bhurji / Paneer + Salad	Tea + Jal Muri with vegetables + fruit	Rice + Roti + Dal + Chicken Chilly / Paneer Chilly + Brinjal/Green Vegetable + Curd
Saturday	Uttapam + Sambar + Chutney + Milk + 2 Eggs / Paneer	Roti + Khichdi + Aloo Chokha + Gobhi + Dahi + Chicken Curry / Chana-Soya + Salad	Tea + Roasted Chana/Makhana + fruit	Rice + Roti + Dal + Chana Masala + Seasonal Vegetables + Curd
Sunday	Masala Dosa + Sambar + Chutney + Milk + Orange/Apple + 2 Boiled Eggs / Paneer	Moderate Fried Rice + Roti + Dal + Makhni + Fish Curry / Shahi Paneer + Vegetable + Salad + Curd	Tea + Baked/less-oil Samosa + fruit	Rice + Roti + Arhar Dal + Lauki Kofta + Seasonal Vegetable + Curd

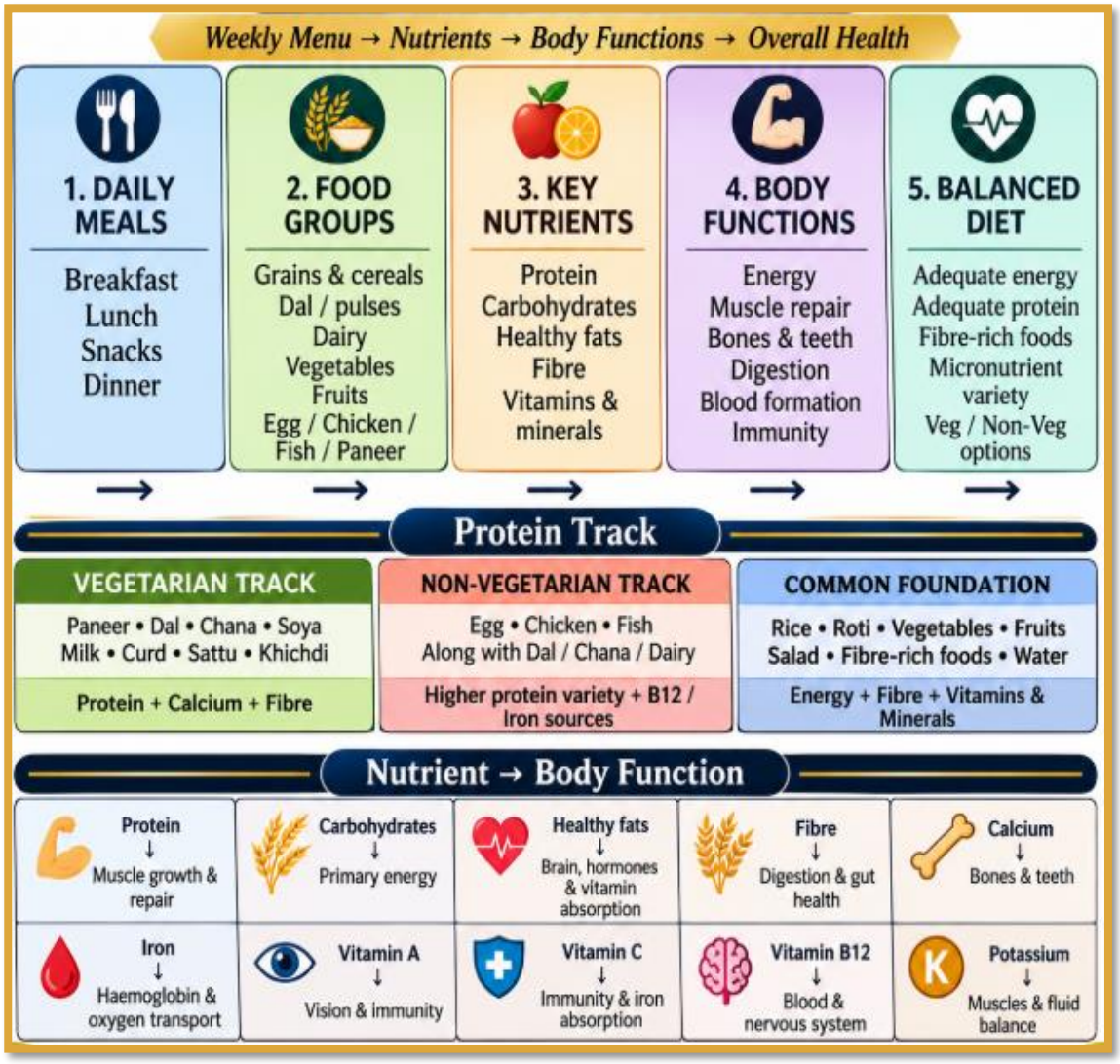
2. Nutrient Balance and Body Requirements

Nutrient	Main Sources Added/Retained	Body Requirement
Protein	Dal, chana, paneer, curd, eggs, chicken, fish, soya	Muscle maintenance & repair
Carbohydrate	Rice, roti, paratha, idli, dosa, khichdi	Main energy source
Healthy fats	Egg, fish, dairy, peanuts/makhana, moderate cooking oil	Brain, hormones & vitamin absorption
Fibre	Vegetables, dal, chana, sprouts, fruits, saag	Digestion & gut health
Calcium	Milk, curd, paneer	Bones & teeth
Iron	Dal, chana, saag, eggs, meat/fish	Haemoglobin & oxygen transport
Vitamin A	Palak, saag, carrots, mixed vegetables, eggs	Vision & immunity
Vitamin C	Fruits, salad, vegetables	Immunity & iron absorption
Vitamin B12	Milk, curd, eggs, fish, chicken	Blood & nervous system
Potassium	Banana, vegetables, dal, fruits	Muscle & fluid balance

3. Daily Nutrition Assessment

Day	Key Protein Sources (Veg)	Key Protein Sources (Non-Veg)	Est. Protein (Veg / Non-Veg)	Est. Calories (Veg / Non-Veg)	Key Carbohydrate / Energy Sources	Key Healthy Fat Sources	Key Fibre Sources	Key Vitamin & Mineral Sources	Body Function / Source
Monday	Paneer, Arhar Dal, Milk	Eggs, Chicken	~43 g / ~84 g	~2,100 / ~2,200 kcal	Rice, Roti, Paratha	Milk, Paneer, Egg	Brinjal, Methi	Methi, Milk	Energy + muscle repair
Tuesday	Chana, Moong Dal, Arhar Dal	Eggs, Chicken	~26 g / ~76 g	~2,150 / ~2,350 kcal	Rice, Roti, Paratha	Egg, Milk, Cooking Oil	Chana, Moong	Chana, Gobhi	Energy + gut health
Wednesday	Idli, Coconut Chutney, Milk	Eggs, Fish	~28 g / ~74 g	~2,100 / ~2,300 kcal	Rice, Roti, Dosa	Milk, Fish	Palak, Vegetables	Vegetables, Curd	Nutrition & immunity
Thursday	Eggs, Bread, Milk	Chicken, Soya	~32 g / ~78 g	~2,100 / ~2,350 kcal	Rice, Roti, Pulav	Egg, Oil	Vegetables, Saag	Saag, Milk	Energy + strength
Friday	Sattu, Curd, Milk	Eggs, Paneer	~30 g / ~75 g	~2,050 / ~2,300 kcal	Rice, Roti, Paratha	Curd, Paneer	Vegetables, Jackfruit	Vegetables, Curd	Digestion & wellness
Saturday	Uttapam, Chutney, Milk	Eggs, Paneer	~30 g / ~72 g	~2,050 / ~2,250 kcal	Roti, Khichdi, Aloo	Milk, Paneer	Gobhi, Vegetables	Fruits, Curd	Energy + bone health
Sunday	Masala Dosa, Chutney, Milk	Eggs, Paneer, Fish	~28 g / ~72 g	~2,100 / ~2,300 kcal	Roti, Fried Rice, Sambar	Milk, Fish	Vegetables, Fruits	Orange, Paneer	Immunity & strength

4. Balance Flow Chart



Overall flow: Balanced meals provide energy, protein, fibre, healthy fats, vitamins and minerals, which together support normal body functions and a balanced daily diet.

Staff Hunger Interventions

The University supports the well-being of its staff by providing access to campus dining facilities, hygienic food services, and a healthy working environment. The University facilitates convenient access to nutritious and affordable meals through cafeteria and food service arrangements, contributing to the health, productivity, and welfare of employees. These initiatives align with SDG 2 (Zero Hunger) by promoting access to safe and nutritious food within the campus community.



National Hunger

Access to Food Security Knowledge

Medhavi Skills University (MSU), Sikkim, contributes to the promotion of food-related knowledge and awareness through educational activities that address nutrition, food preservation, food safety and sustainable food practices.

As part of these efforts, the University organised a guest lecture titled **"Food Preservation & Processing Techniques at Home Scale"** at PM Shri Ralap School, Singtam, on 10 September 2025. The session was delivered by Mr. Debasrita Banerjee, Assistant Professor, Department of Basic Nutrition and Dietetics. It covered household food preservation methods, including refrigeration, drying, pickling and fermentation, while highlighting food safety, sustainability and waste reduction.

Such educational initiatives help disseminate practical knowledge about preserving food, reducing avoidable food waste and supporting responsible food consumption. They are relevant to Sustainable Development Goal 2 (Zero Hunger), particularly the promotion of food security knowledge and awareness of sustainable food practices.

Further evidence, including event reports, attendance records, photographs and details of additional food-security awareness programmes, can help demonstrate the University's contribution to this indicator.

MSU Organises Guest Lecture

The University recently had the opportunity to engage with the young learners of PM Shri Ralap School, Singtam, through an insightful guest lecture held on September 10, 2025. The session was delivered by Mr. Debasrita Banerjee, Assistant Professor, Department of Basic Nutrition and Dietetics, on the theme "Food Preservation & Processing Techniques at Home Scale. Targeted at Class 10 students, the lecture introduced practical and easy-to-implement methods of food preservation such as refrigeration, drying, pickling, and fermentation. By blending scientific principles with everyday practices, the session empowered students to understand the importance of food safety, sustainability, and waste reduction. The highly interactive nature of the lecture encouraged active participation, with students showing keen interest in exploring how traditional and modern preservation techniques can be applied at home. The discussions not only enhanced their subject knowledge but also inspired them to adopt healthier and

more sustainable food habits in their daily lives. MSU extends sincere gratitude to PM Shri Ralap School for their warm welcome and collaboration. Initiatives like these reflect the university's commitment to fostering skill-based education and bridging the gap between classroom learning and practical knowledge.

https://www.msu.edu.in/events/msu-organises-guest-lecture



Events for Local Farmers and Food Producers

The University contributes to SDG 2 (Zero Hunger) by conducting knowledge-sharing and capacity-building programmes that support sustainable food practices and rural livelihoods. Through activities such as the Guest Lecture on Food Preservation & Processing Techniques and the Rural Tourism Entrepreneurship Programme, conducted in collaboration with the Government of Sikkim, the University promotes food preservation, reduces food wastage, adds value, and enhances livelihoods for local communities. These initiatives strengthen community resilience and support sustainable development in rural areas.

Event	Date	SDG 2 Relevance	Evidence Link
Guest Lecture on "Food Preservation & Processing Techniques at Home Scale"	10 Sept 2025	The session introduced practical food preservation methods such as drying, pickling, fermentation, and	
15-Day Rural Tourism Entrepreneurship Programme (Government of Sikkim & MSU)	Feb 2025	MSU trained local villagers to develop sustainable livelihood opportunities and entrepreneurship skills. The program supported rural communities, including agricultural households, by strengthening income-generation and local economic development.	https://www.msu.edu.in/events





University Access for Local Farmers and Food Producers

Medhavi Skills University promotes community-oriented and experiential learning through its innovative pedagogy, which emphasises real-world application of knowledge, skill development, and community engagement. Through outreach activities, training programmes, and knowledge-sharing initiatives, the University extends practical learning beyond the classroom, enabling local communities, farmers, and food producers to benefit from expertise in food preservation, nutrition, entrepreneurship, and sustainable livelihood practices. The University's pedagogical approach supports the dissemination of food security knowledge and capacity-building, contributing to SDG 2 (Zero Hunger).





"A world without hunger begins with awareness, responsibility, and sustainable choices. Medhavi Skills University inspires young minds to value food, understand nutrition, support sustainable practices, and contribute towards communities where everyone has access to healthy and sufficient nourishment."

Medhavi Skills University

www.msu.edu.in

Topakhani, Lower Chisopani
PO: Singtam Bazar, PS: Singtam
District: East Sikkim
Sikkim – 737134