



**L** OVELY  
**P** ROFESSIONAL  
**U** NIVERSITY

*Transforming Education Transforming India*

# SUSTAINABLE DEVELOPMENT

# ANNUAL REPORT

# 2022



# Contents

Introduction.....	3
<b>1. No Poverty .....</b>	<b>5</b>
<b>2. Zero Hunger .....</b>	<b>15</b>
<b>3. Good Health and Well Being.....</b>	<b>19</b>
<b>4. Quality Education .....</b>	<b>23</b>
<b>5. Gender Equality .....</b>	<b>31</b>
<b>6. Clean Water and Sanitation.....</b>	<b>37</b>
<b>7. Affordable and Clean Energy .....</b>	<b>47</b>
<b>8. Decent work and economic growth .....</b>	<b>52</b>
<b>9. Industry Innovation and Infrastructure .....</b>	<b>55</b>
<b>10. Reduced Inequalities.....</b>	<b>60</b>
<b>11. Sustainable Cities and Communities.....</b>	<b>62</b>
<b>12. Responsible Consumption and Production.....</b>	<b>66</b>
<b>13. Climate Action.....</b>	<b>73</b>
<b>14. Life below Water .....</b>	<b>86</b>
<b>15. Life on Land .....</b>	<b>110</b>
<b>16. Peace, Justice and Strong Institutions.....</b>	<b>113</b>
<b>17. Partnership for The Goals.....</b>	<b>123</b>
LINK TO SDG WISE ANNUAL REPORT .....	128

## **ANNUAL PROGRESS REPORT**

### **Introduction**

The University understands and recognizes the importance of Sustainable Development Goals and is firmly committed to address the environmental issues at the global platform. LPU works in proximity with private and public domains, NGOs, charities, research organizations in order to form a congenial relationship vis-à-vis sustainable development. The university is highly committed to strengthen its social and civic duties and time and again embark on new passages to uplift the spirit of sustainable goals.

The Varsity endorses the UN's undertaking to "Leave No One Behind" in which various countries are working in collaboration to provide the fundamental amenities' in order to gain advancement in their lives. The University works in tandem with myriad internationally acclaimed institutions and thereby provides its students holistic education while upholding the notion of accessibility of resources to all and sundry. LPU has proud association with multifarious governmental, non-governmental and local organizations to ensure a potent education ambience and also pays heed to foster sustainable inclusivity in the society. In addition to this, the university has various student organizations which work wholeheartedly in ensuring community development in order to bring a sanguine change in the society. The university categorically involves its students in multitude activities pertaining to sustainable development and also perpetually works on the research dynamics that plays a crucial role in obtaining desired results.

In a nutshell, to nurture the academic outlook of its students, the university keeps no stone unturned to provide a diverse platform to its students in which they can not only up skills themselves in academia but also comprehends the environmental set up that can boost the sustainable goals in equal measures. The university profoundly understands the need to collaborate with public and corporate sectors; civil society etc. to ensure that the planet earth can be in its best form and the future generations can harness it further.

### **Research and Development**

Lovely Professional University pays immense emphasis on creating a research based ambience that can foster innovation, collaboration and upscale the research dynamics. The Varsity has a commitment to develop and hone research stewardship and categorically supports the research undertakings along with optimizing the various resources required for the same. LPU has the endeavor to raise the bar pertaining to its research graph and become one of the leading academic institutions in this pursuit. The faculty of LPU has been actively showcasing their involvement in research initiatives and has achieved

commendable success in publishing 20600+ research papers and approximately 20000+ book chapters till date.

The University's research, innovations, and patents are more aligned to various SDGs establishing University's commitment towards multitude sustainable goals. In order to promote research among young aspirants and budding researchers, the University provides seed money to carry out their research initiatives and to fulfill all the peripheral requirements like purchasing equipment, travel expenses etc.

In addition to this, the Varsity is extremely committed to fostering its faculty's experience by making them participate in various national and international conferences which can widen up their horizon. Also, they have been encouraged consistently to be a part of various seminars, workshops, research work in collaboration to uplift their professional outlook at large. The University is providing financial aid to its employees to participate in such workshops, seminars, conferences or build association with various research bodies. The research carried out by the faculty members in the form of papers, book chapters etc, yields the benefits of leaves which can be utilized as research leaves for attending various programs vis-à-vis research and development.

Following are some renowned agencies which are funding projects:

*Erasmus+: Higher Education - International Capacity Building*

*UNESCO*

*RIHN, Japan*

*Department of International Trade, Newport United Kingdom*

*Erasmus+: Higher Education - International Capacity*

*Education, Audiovisual and Culture Executive Agency, Cofunded by the Erasmus+ Programme of the European Union*

*IC-IMPACTS, India-Canada Centre for Innovative Multidisciplinary Partnerships to Accelerate Community Transformation and Sustainability*

*Research and Innovation, Lakehead University*

*India Canada IMPACTSCenter of Excellence, Vancouver, Canada*

Furthermore, LPU has signed Memorandum of Understanding with various research organization has been signed. LPU's commitment to address the healthcare requirements of our diverse population, which

includes students, faculty, and the wider community, is unwavering. These collaborations aim to harness the collective expertise, resources, and innovation of these entities to create a dynamic environment to improve over the health and well-being at local and global Level. At National level, LPU has collaboration with number of health institutions, amongst which *YourDOSTHealth Solutions Private Ltd. Bengaluru, Karnataka is a prominent one. Also, there are MOUs with international partners such as University of Huddersfield, UK, University of Ostrava, Czech Republic, Western Sydney University, Australia, Nguyen Tat Thanh University, Vietnam, University of Greenwich, UK to name a few.*

In addition to this, Intellectual Property Rights (IPR) is playing a key role in enhancing the elements of socio-economic and innovation in the societal arena. IPR is becoming a large commodity with each passing day and hence the awareness of it is indeed indispensable in the context of global knowledge and public awareness. Therefore, keeping in mind the importance of IPR, LPU has successfully organized many workshops and seminars with its prime focus on patents, copyrights etc. These sessions were led by experienced speakers who possess good meticulous information about it and have done enough research and practice. As a result, there were 3400+ patents, around 1400 copyrights, 49 design registrations, 13 trademarks and 113 Australian innovation patents till date.

## **1. No Poverty**

### **Introduction:**

Lovely Professional University (LPU) provides an opportunity to delve into our activities and accomplishments, highlighting our steadfast commitment to Sustainable Development Goal (SDG) 1 - No Poverty.

This Annual Report for SDG 1 does not merely present a catalogue of achievements; it encapsulates our unswerving determination to instigate meaningful transformation. Throughout the year, we conscientiously harnessed our resources, passion, and expertise to undertake a diverse spectrum of initiatives, addressing both the causative factors and the ramifications of poverty. From empowering students through skill-based education to the distribution of essential clothing to the less privileged, and from providing critical assistance to flood-affected communities to supporting menstrual hygiene, our influence resonates across various societal dimensions.

Across various dimensions, Lovely Professional University (LPU) is deeply committed to fostering positive change and community development. LPU's extensive initiatives can be categorized into four overarching themes: **(A) Community Service and Outreach, (B) Skill Development and Education,**

**(C) Financial Aid and Scholarships, and (D) Agricultural Advancement and Career Empowerment Initiatives.**

**(A) Community Service and Outreach:**

**Gyandeeep:**

The Gyandeeep Project is an embodiment of our enduring commitment to community service and outreach. Our devoted LPU NSS volunteers have embarked on a transformative journey, aiming to eradicate poverty by equipping the younger generation with skill-based education. In nearby villages, we have addressed the pressing issue of limited access to education, especially among underprivileged children facing socio-economic challenges.



**LPU NSS volunteers are working tirelessly to provide underprivileged children with access to quality education, nurturing the leaders of tomorrow**

**Joy of Giving:**

Inspired by the belief that joy multiplies when shared, the students of Lovely Professional University's National Service Scheme (LPU-NSS) have embarked on a heart-warming journey of compassion and giving. The act of sharing joy through the simple yet significant gesture of providing clothing to those in need reflects the benevolence and humanitarian spirit of our students.



### **LPU-NSS Students Extend a Helping Hand: Sharing Joy Through Clothing Distribution in Slum Areas of Punjab**

#### **Flood Relief Camps:**

In the aftermath of devastating floods, which affected millions, LPU proactively stepped in to provide vital support. With millions impacted and thousands in relief camps, our efforts made a significant impact. Donations for food, shelter, and essential supplies have been delivered. We extend heartfelt thanks to LPU alumni worldwide for their invaluable support in making a difference for those in need.



### **LPU Extending a Helping Hand to Flood-Affected Communities**

## "NARI HER RIGHT HER PRIDE":

Under the "NARI HER RIGHT HER PRIDE" initiative, LPU took a proactive stance to address the long-standing issue of menstrual hygiene that women have been grappling with. A free Sanitary Pad Distribution Drive was organized at Chandigarh By-Pass slum-1, Phagwara.

This endeavour empowers numerous women by alleviating their menstrual hygiene challenges and contributing to their well-being.



Sanitary Pad Distribution Drive

## Sathi-Village Adoption Program:

LPU's Sathi-Village Adoption Program goes beyond typical community service initiatives by focusing on Skills, Agriculture, Technology, Health, and Ideation (SATHI) to empower marginalized communities. The program extends its reach to over 14 villages and slums, including Maheru, Chaheru, Madhopur, Raipur Prohala, and many others.



Medical camp organised by the University for villagers





**Training program organised for farmers on use of IOT in spraying**

### **Medical Camps:**

LPU's commitment to community welfare extends to organizing a series of community-focused medical camps. These camps serve as a beacon of hope, aligning with Sustainable Development Goal (SDG) 1, which aims to eliminate poverty in all its forms. The medical camps are not only about immediate relief but encompass a broader spectrum of activities.



**Medical Camp organised by the University**

In addition to providing general medical check-ups, they offer specific services, including blood sugar tests, blood pressure checks, BMI assessments, and specialized care from dedicated specialists such as gynaecologists, paediatricians, and orthopaedists.

Furthermore, LPU goes the extra mile by distributing free medicines to patients based on their specific medical requirements. This initiative emphasizes LPU's unwavering dedication to the health and well-being of the residents of the areas where these camps are organized.

## Physiotherapy Camps:

LPU's "LPU Free Camps for Community Empowerment under SDG 1: No Poverty" represent a tangible demonstration of LPU's commitment to breaking the cycle of poverty. These camps align closely with Sustainable Development Goal 1, which seeks to eliminate poverty by offering essential resources, education, support, and community building.



**Restoring Mobility and Wellness through Physiotherapy.**

## Yoga for Community:

LPU's commitment to promoting yoga for the local community goes beyond enhancing physical and mental well-being. It directly aligns with Sustainable Development Goal 1: "No Poverty." By imparting yoga techniques and practices, LPU equips individuals with valuable tools to maintain good health and reduce stress.



**Guiding Wellness Together: Yoga Day**

## **(B) Skill Development and Education**

### **Training Programme organized by the University:**

"In alignment with the United Nations Sustainable Development Goal (SDG) 1, 'No Poverty,' Lovely Professional University (LPU) has demonstrated its commitment to poverty eradication through various initiatives, including the 'Training Programme organized by the University.' This program is designed to empower individuals with the practical skills necessary to thrive in the modern job market, which aligns closely with SDG 1's goal of reducing inequality and fostering economic growth.

LPU's training programs cover a diverse range of fields, from technology and entrepreneurship to healthcare and agriculture. By offering these skill-based training opportunities, the university is actively addressing economic disparities and providing individuals with the tools they need to break free from the cycle of poverty. The training programs are not just about acquiring skills; they represent a pathway to economic empowerment and financial stability.



**Some Glimpses from the training program Organised by LPU**

These initiatives serve as beacons of hope and empowerment for individuals striving to overcome economic challenges. By equipping them with relevant skills, LPU is actively contributing to the fulfilment of SDG 1, ensuring that poverty is not a barrier to personal and professional growth."

### **Entrepreneurial Support Initiatives:**

"LPU's commitment to fostering entrepreneurial spirit and innovation within its academic ecosystem is aligned with the United Nations Sustainable Development Goal 1, 'No Poverty.' Entrepreneurship is a powerful tool for reducing economic disparities, and LPU recognizes this significance. The university

provides a range of dedicated support mechanisms, including incubation centres, business development mentors, industry associations, and capacity-building programs.



### Some of the Startups

Entrepreneurial initiatives at LPU aim to break the cycle of poverty by empowering aspiring entrepreneurs with the resources and guidance they need to start and grow their businesses. The university's focus on entrepreneurship aligns closely with the objectives of SDG 1 by offering students and individuals the opportunity to create their own economic opportunities. This not only reduces poverty but also contributes to economic growth in the region and beyond.

By fostering entrepreneurship, LPU plays an active role in addressing the root causes and consequences of poverty. Through these initiatives, students and aspiring entrepreneurs can realize their economic potential, thereby contributing to the broader mission of SDG 1 – ensuring that no one is left behind in the journey towards a poverty-free world."

### (C) Financial Aid and Scholarships:

**Financial Aid – Need-Based Scholarship:** LPU has introduced a need-based financial aid program to tackle economic disparities in education. This initiative aims to provide support to students hailing from Economically Weaker Sections (EWS) and other special categories, including Single Girl Child, Single Mother, and Students from Minorities, Transgender, and Non-Traditional Students. By offering financial assistance, LPU empowers these students to overcome financial hurdles and pursue higher education, ultimately enhancing their employability prospects. This initiative resonates with the essence of SDG 1 by breaking down economic barriers and facilitating access to quality higher education.

**LPU Study Grant:** Under the banner of the 'LPUNEST Study Grant,' deserving students receive financial support to pursue higher education at prestigious institutions other than Lovely Professional University. The program, now in its fourth edition, has already granted scholarships totalling over Rs. 6 crore to meritorious students. These grants empower students to access education at institutions like IITs, NITs, IIMs, NLUs, IHMs, NIDs, IITs (DoD/IDC), NIFTs, AIIMs, and Government Universities & Colleges (Central/State). Additionally, they have the choice to enrol in programs at LPU and access scholarships of up to Rs. 6.8 lakh. This initiative aligns perfectly with SDG 1 by fostering inclusive access to education and breaking down financial barriers for students seeking higher education.

**Education Loan Assistance:** LPU further facilitates accessibility to education by establishing a dedicated loan assistance cell. This cell assists students in obtaining educational loans from associated banks at the time of admission and throughout their academic journey. Education loans provide students with the necessary financial resources to fund their education, helping them pursue their academic aspirations. By supporting students in securing educational loans, LPU is contributing to SDG 1's objective of eliminating poverty in all its forms.

#### **(D) Agricultural Advancement and Career Empowerment Initiatives:**

##### **Farmer Technology Innovation: Empowering Agriculture through Technology**

This initiative empowers local farmers by enhancing agricultural productivity and economic sustainability, ultimately contributing to poverty reduction in the farming communities.



**Nurturing Tomorrow's Agriculture: LPU Empowering Local Farmers**

In a region where agriculture is the backbone of many livelihoods, Lovely Professional University (LPU) takes on the role of a catalyst for positive change. LPU's commitment to supporting local farmers and fostering innovation in agriculture was recently demonstrated through an enlightening awareness program known as the "Farmer Technology Innovation Incubation Activity." This initiative is designed to bridge

the gap between traditional agricultural practices and modern technology, ensuring that farmers can harness the latest advancements to improve their agricultural productivity and sustainability.

### **DISHA - Career Counselling & Development: Guiding the Pathways to Success**

DISHA empowers individuals within the education sector by providing career guidance, ultimately aiding in poverty alleviation through informed career choices and educational success.



**Some Glimpses of the Training Program under DISHA**

The word "Disha," originating from the Sanskrit language and translating to "Direction," aptly reflects the essence of LPU's social initiative, "DISHA - Career Counselling & Development." This program serves as a beacon of guidance and support for individuals involved in the field of education, including students, educators, administrators, and support staff across various educational institutions, encompassing schools, colleges, NGOs, and educational organizations nationwide.

DISHA is a collaborative effort that brings together knowledgeable counsellors and experts with the primary objective of providing essential assistance and guidance to students, teachers, and educational institutions. It assists them in navigating the constantly evolving landscape of the education sector, adapting to its ever-changing demands.

This initiative strives to provide clarity to students, helping them find the right path to achieve their career aspirations. Simultaneously, it works to elevate the skills and capabilities of mentors, teachers, and parents. In an age marked by fierce competition in every facet of life, DISHA underscores the necessity for sound guidance in making pivotal decisions concerning one's career and life.

## **Conclusion:**

As we conclude this Annual Report, we find ourselves reflecting on a year marked by unwavering commitment to Sustainable Development Goal (SDG) 1 - No Poverty. The year 2021-22 has been a testament to the transformative power of education, community outreach, and service. Our journey to eliminate poverty and inequality has been one of passion, dedication, and meaningful action.

Our commitment to community service, skill development, financial aid, and agricultural empowerment reflects a holistic strategy to uplift socio-economic conditions. Lovely Professional University (LPU) is more than an institution; it's a catalyst for change, an enabler of opportunities, and a source of empowerment for individuals striving to break free from economic constraints.

## **Future Plans:**

Looking ahead, LPU's vision is to expand the impact of our initiatives and further align our efforts with SDG 1. We plan to continue our journey of empowerment by introducing new programs and expanding existing ones.

As we move forward, we remain steadfast in our dedication to fostering positive change, eliminating poverty in all its forms, and ensuring that no one is left behind. Lovely Professional University will continue to be a beacon of hope, empowering individuals to break free from economic constraints, strive for personal and professional growth, and contribute to a world where poverty is just a memory of the past. Together, we can build a brighter and more equitable future for all.

## **2. Zero Hunger**

Lovely Professional University is committed towards achieving Sustainable Development Goal 2 - Zero Hunger. It is evident through a multifaceted approach encompassing education, research, community engagement, and sustainable practices. This summary highlights key initiatives undertaken by LPU and their impact in contributing to SDG2:

### ***Comprehensive Approach to Zero Hunger***

To address hunger comprehensively, LPU focuses on various aspects:

### ***Curriculum Integration:***

LPU has incorporated courses related to sustainable agriculture, food security, and nutrition across disciplines to raise awareness and build capacity for addressing hunger related challenges.

### ***Research and Innovation:***

LPU promotes research activities focused on sustainable agriculture and food production. Faculty and students collaborate on projects exploring new agricultural techniques and efficient farming practices and food preservation methods.

### ***Community Engagement:***

LPU actively engages with local communities to promote sustainable agriculture and improve access to nutritious food. Workshops, training programs, and awareness campaigns are organized on sustainable farming practices and food waste reduction.

### ***Campus Initiatives:***

LPU implements sustainable practices within campus, such as community gardens, organic farming, and reducing food waste. These initiatives serve as epitome to inspire students and the wider community.

### ***Partnerships and Collaborations:***

LPU collaborates with government agencies, NGOs, and international organizations to share best practices and develop innovative solutions. These partnerships contribute to larger initiatives aimed at addressing hunger-related issues.

### ***Academic Initiatives***

Curriculum Integration: Sustainable Agriculture, Food Security, and Nutrition are integrated into various disciplines. LPU has implemented the Rural Agriculture Work Experience (RAWE) program, where students share knowledge of sustainable farming with local farmers, creating awareness of current agricultural practices. The Experience Learning Programme (ELP) exposes farmers to various farming techniques, with specific modules run in the academic year 2021-22.



### ***Research Initiatives***

Faculty contributes to SDG2 through research publications and patents, with a focus on Zero Hunger. 75 Research Papers and above 32 patents has been published on Zero Hunger. Research papers and patents cover wide-range of topics viz., optimizing potato agronomic output, wastewater treatment in the tannery industry, vermicomposting, salinity and drought stress in cereals, sustainable protein sources, environmental impacts on agricultural efficiency and more. These publications and patents demonstrate LPU's commitment to innovative solutions and advancement in agriculture, food security, environmental remediation and sustainable practices.

### ***Initiatives to Address Food Wastage***

LPU implements strategies to minimize food wastage, including:

Pre-subscription System: Students subscribe for food services before joining, allowing better planning of materials and reducing excess production.

Menu Planning: A predefined menu helps manage inventory and ensures a balanced, nutritious diet.

Awareness Campaigns: Signs remind students to self-serve based on their appetite, and leftover food is collected for animal feed.

Scheduled Meal Times: Food served at predefined times according to time table, allowing students to plan their meals and minimizing potential for food wastage.

Communication and Coordination: Reduction in excess food preparation by giving prior information to contractors about the number of costumers, fostering synergy among vendors and hostel wardens.

Waste Tracking: Bins installed by contractors for leftover food collection, with daily tracking of bin quantities to monitor and manage food wastage effectively.

Animal Feeding: Leftover food collected and transported to nearby piggeries and cowsheds to feed animals, contributing to sustainable waste management.

Proper Storage Practices: Storage of fruits and vegetables adequately to prevent wastage and maximize freshness and longevity.

Inspection: Frequent inspections are carried out to ensure proper execution of guidelines related to food storage, preventing overbuying and ensuring efficient use of resources.

***Webinar on Zero Hunger:*** LPU conducted a webinar on SDG Zero Hunger, emphasizing awareness, challenges, and initiatives, featuring insights from Mrs. Gladys N. Baite of Akshaya Patra Foundation.

***One-day camp on Trichoderma and Jeevamrut:*** Focusing on sustainable agriculture practices. The camp's focal point revolved around addressing the alarming degradation of soils in Punjab and equipping farmers with cutting – edge, cost effective strategies to mitigate the risk associated with chemical – intensive agriculture.

***Guest lectures on Zero Hunger:*** LPU conducted lecture regarding the opportunities and challenges in achievement of the sustainable goal of Zero Hunger delivered by Ms. Naomi Joshua. The discussion also opened the doors to our contribution towards the cause as hospitality graduates.

***Guest lectures on Sustainable Nutrient:*** Management in conservation agriculture for small holder farming system. The guest lecture promotes significant crop and soil management practices for sustainable agriculture.

***Workshops on Biochar and Stubble Management:*** It emphasized the importance of biochar application in different crops and briefed about different biochar-making methods. In collaboration with Department of Microbiology, IARI and Department of Plant Pathology, School of Agriculture has conducted one day workshop on stubble management with farmers aimed to address the challenges and explore effective solutions for managing stubble residue in agricultural practices.

## ***Social Initiatives***

LPU's social initiatives include:

1. *Joy of Giving*: LPUNSS organized events across India, donating essentials to orphanages and spreading happiness.
2. *Food Wastage Awareness*: LPU-NSS volunteers educate students on the importance of reducing food waste.

## ***Key Outcomes***

These initiatives resulted in:

1. Increased awareness of SDG Zero Hunger and its challenges.
2. Skill development and knowledge enrichment through guest lectures and workshops.
3. Practical solutions for farmers to enhance crop productivity sustainably.
4. Active community engagement and contributions to a happier society.

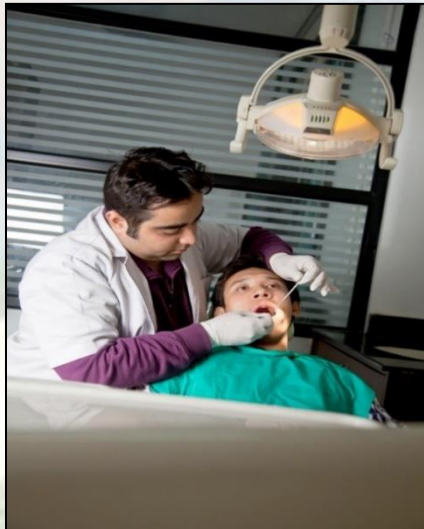
In summary, Lovely Professional University is actively contributing to SDG2 by integrating sustainable practices into education, fostering research and innovation, engaging with communities, and promoting responsible food management practices. Through these initiatives, LPU is making a positive impact on achieving Zero Hunger and inspiring others to join in the collective pursuit of a world without hunger.

### **3. Good Health and Well Being**

Lovely Professional University (LPU) prioritizes health and well-being for all, providing accessible and high-quality healthcare through academic programs and on-campus facilities. **LPU offers diverse undergraduate and master's programs in health sciences and healthcare management**, aligning with SDGs for Good Health and Well-being. Practical training at multi-specialty hospitals ensures students meet clinical objectives. The Faculty of Applied Medical Sciences focuses on producing socially responsible healthcare professionals.

**LPU aligns its programs with SDG 3: Good Health and Well-being**, offering diverse options at undergraduate, postgraduate, and doctoral levels. Practical training at multi-specialty institutions is integral for achieving clinical objectives. Undergraduate programs include Pharmacy, Physiotherapy, and more. Postgraduate programs comprise Psychology, Clinical Biochemistry, and others. Doctoral

programs cover various healthcare fields. **LPU's Health & Well-being Framework focuses on accessible healthcare services for students, employees, and the community.** It encompasses physical, psychological, and social well-being. Initiatives include outreach programs, health insurance, awareness campaigns, check-up camps, and local, national, and international collaborations. LPU's Uni-Health Centre operates 24/7, offering free consultations, ambulances, and emergency medical care. Regular health and counseling sessions and check-up camps promote health awareness, personal hygiene, and emotional well-being among students, staff, and the public.



**Dental Facility at LPU**



**Eye Checkup at LPU**

**LPU's Counselling & Happiness Cell promotes emotional and psychological well-being** through workshops, individual and group counseling, and complete confidentiality.



Health center partners with Dr. Lal Pathlabs for on-site diagnostics. LPU's Pradhan Mantri Bhartiya Jan Aushadhi Kendra offers affordable quality medicines. The university prioritizes **all-round student development**, providing world-class sports facilities, including outdoor grounds and Olympic-standard

pools. Numerous indoor sports options exist, and LPU actively participates in national and international competitions.



**LPU offers sexual and reproductive health services**, including education and expert discussions on various topics related to human sexuality and reproductive health. Individual counseling is also available.

**Research Initiatives at LPU encompass projects funded by government agencies, focusing on SDG 3.** Notable projects include cellulolytic cocktails development, SARS-COV-19 pharmacophore modeling, biodiversity registers, and ophthalmic preparations. Additionally, LPU researchers contribute to health-related areas such as cancer, HIV, diabetes, and heart healthcare, using cutting-edge technologies like CRISPR/Cas9. Their work includes COVID-19 response and Diabetes Risk Prediction, addressing SDG 3 needs. **LPU faculty annually files patents**, including health-related technologies for community benefit. **LPU fosters partnerships at international, national, and local levels**, aiming to address diverse healthcare needs. These collaborations bring together expertise and resources to enhance health and well-being globally. Local collaborations offer quality healthcare to students, staff, and the community. LPU prioritizes global cooperation, fostering a diverse, inclusive, and interconnected academic community through extensive collaborative initiatives and partnerships. **LPU's 2021-22 outreach programs** enhance community health and well-being, emphasizing health education, preventive measures, medical screenings, immunizations, and maternal and child health. Collaborations with local partners support education, medical camps, vocational training, and environmental awareness.

**"ICFHM-2022** fosters research and awareness on feminine hygiene, connecting experts across various fields to share their insights and knowledge."



"LPU conducts annual blood donation drives under 'Samarpan - A Lifeline,' collaborating with societies dedicated to this cause."

"LPU-NSS volunteers partnered with Civil Hospital for a commendable three-day Pulse Polio Campaign, aiding polio eradication."



"LPU-NSS conducts 13-day yoga camps at 25+ locations in Punjab."



"Morning yoga session for freshmen promotes well-being and community bonding."

"LPU shares sports facilities with local schools and the general public, promoting athletics and community engagement."



"LPU offers **mental health support** through the Department of Counselling and Happiness, providing individual and group counseling, psychological testing, meditation, and a specialized Psycho Neurobics Lab to promote overall well-being and mental health."



**LPU promotes a smoke-free campus for a healthier, safer environment.**

LPU's future plans include world-class health research, focusing on HIV/AIDS, breast cancer, and diabetes, enhancing mental health, promoting feminine hygiene, outreach, happiness, and equitable healthcare access. In conclusion, LPU's report highlights its successful initiatives in fostering community relationships, promoting well-being, and addressing various health dimensions.

#### **4. Quality Education**

##### **INTRODUCTION**

**Lovely Professional University (LPU) is dedicated to establishing itself as a prominent center for superior education, offering remarkable learning prospects, extensive research possibilities, and various other academic initiatives. LPU has consistently attracted both national and international academic communities, fostering excellence in higher education, facilitating conferences, hosting guest lectures, and organizing workshops etc.**

## **2. ACADEMIC INITIATIVES**

The University's outstanding academic performance is a direct consequence of the high-quality education it provides, stemming from diligent endeavors in the realm of curriculum quality. This is achieved through active engagement of stakeholders, innovative pedagogical methods, comprehensive evaluation, experiential learning, student-centered teaching, participatory learning, skill enhancement, and enrichment of courses. Furthermore, a rigorous process for reviewing the quality of education is in place, encompassing inspections and feedback mechanisms. The excellence of LPU's educational experience is evident through the following key attributes. Hybrid Teaching, Curriculum Relevance, Quality in Pedagogy, Quality in Evaluation, Experiential learning, and Personalized Learning.

### **Cohorts and Career Progression**

Cohort is a collaborative learning style in which a group of individuals advances through an educational program together. The students are provided with a set of learnings to develop their skills that they can use throughout their lives and get good placements. The cohort has a wide array of benefits. The underlying benefit of a cohort is the fact that people learn better as they study as part of a group. Cohort provides an active, interactive, and dynamic setting for students to grow their knowledge and skills which will also be beneficial for their field of interest.

### **Review of quality education**

The education system of any HEI needs to be dynamic, flexible, competent and updated for fulfilling the needs of contemporary society. Therefore, it needs to be reviewed regularly. LPU follows the OBE system which is implemented through Programme Outcomes (POs), Programme Specific Outcomes (PSOs), and Course Outcomes (COs) in the curriculum. The successful implementation and review of OBE model in LPU curriculum brings fruitful results in the form of quality education. The implementation of quality education is further monitored by following the strategy of class inspection and feedback. Following initiatives are taken for the awareness of faculties and students, and for review of quality education in letter and spirit, well stated Programme Outcomes (POs), Programme Specific Outcomes (PSOs), and Course Outcomes (COs):

## **EDUCATIONAL RESOURCES**

### **Central Instrumentation Facility (CIF)**

Lovely Professional University is committed to impart quality education to society. LPU on its mission to 'Transforming Education Transforming India' not only provides the quality education to its own students but also renders its resources to the outside students without any discrimination. Lovely Professional University established Central Instrumentation Facility (CIF) to support and boost the advancement in research and development in the field of science and engineering. Central Instrumentation Facility (CIF), Division of Research and Development has provided its core facility to the internal users (Students, research scholars and faculties form LPU) and external users from academic & research institutions, universities, industries, and NGOs for the characterization of their samples. The modern analytical instruments present in this facility offer a wide range of



analytical methods/techniques for chemical/material testing and analysis. The concerted efforts of the CIF will contribute to the upliftment of society at large.

### **Modern, well equipped & State of Art Laboratories**

Laboratories provide students a perfect learning environment for conducting experiments, developing problem-solving and critical-thinking skills. The theoretical knowledge that the students gain in the classrooms is tried, tested, and validated in the labs which can further lead to path breaking research and innovations.

To provide an experimental foundation for the theoretical concepts introduced in the lectures, it is important that students have an opportunity to verify some of the ideas for themselves. Keeping in view the importance of labs in academic excellence, Lovely Professional University takes pride in its well-equipped advanced laboratories where the students are encouraged to have a practical oriented approach. Link: <https://www.lpu.in/academics/laboratories.php>

### **Innovation Studio**

Innovation Studio is the creative and collaborative hub of Lovely Professional University, where students and faculties team up to conceptualize, prototype, and iterate projects that solve problems, influence change, and comment on our society. It brings students together in a shared space to collaborate on turning their ideas into reality. The department is present in the Innovation studio which is set up in an huge area of 50,000 sq.ft (approx.) and comprises of 9 different types of labs from Ideation to Assembly and Fabrication. The Innovation Studio serves as a central hub for students to share and cultivate ideas from all disciplines across the university. Every year the Innovation Studio organizes various workshops and webinars to nurture the knowledge of the students. The studio also encourages and motivates students to participate in various national and international competitions where our students have participated and also successfully marked their presence through win.



**Innovation Studio**

## **Open Access to e-Resources**

LPU has pledged to create an all-pervasive learning atmosphere and towards the realization of this goal it has been providing open access of its high-grade study materials on the World Wide Web. The study material can be easily accessed by all students enrolled in Distance Education Programs, Regular Programs as well as students of other universities or colleges, employees, executives or any other person who seeks to enhance his/her learning. This material is available in the form of e-books and Self Learning Material (SLMs) that can be easily accessed and downloaded. The aim of this initiative is to give back to the community by promoting a culture of academic inclusiveness. Offering free access to study materials and educational resources can have a significant positive impact on the learning community and by extending its services to external candidates, the university is promoting a culture of knowledge sharing and accessibility.

Link: <https://www.lpude.in/about-us/availability-of-online-study-material.php>

## **Comprehensive Library Services**

Library of any university plays the most vital role to widen the scope of classroom learning and teaching. Students, teaching staff, and staff members have open access to academic libraries in colleges and universities to facilitate higher learning, research, and dissemination of knowledge.



**Library**

## **EVENTS FOR GENERAL PUBLIC**

Lovely Professional University fosters implementation of professional knowledge in society and thereby organizes many events and workshops for public which gives them an edge and help develop oneself personally and makes them aware about societal needs. No matter what stage of education/working, one must keep learning. Depending on the field, there are many skills, tools, techniques, languages that help one gain an upper hand. Keeping a similar in view university organized many STC's/events/activities for

public in the academic year 2021-2022, like- Industry 4.0, Kishan Sikhilai Camp, Awareness Rally against Stubble Burning with a primary focus on enriched learning offering unique perspectives. The university going beyond mere certification, are open to professionals, students, and the wider community. The details events/workshops organized in the academic year are listed below:

<b>Sr. No.</b>	<b>Events related to Quality education</b>	<b>Link</b>
1	Scale Development and Standardization	<a href="#">Click Here</a>
2	E-TABS Software	<a href="#">Click Here</a>
3	Art and Science of Research Paper and Patent Writing to Publication	<a href="#">Click Here</a>
4	Research Methodology and Data Analysis	<a href="#">Click Here</a>
5	Text Analysis and Pedagogy in Digital Humanities	<a href="#">Click Here</a>
6	Article Publication in High Impact Journals and Reference Management	<a href="#">Click Here</a>
7	Scientific & Technical Drawing with LaTeX	<a href="#">Click Here</a>
8	Advanced AutoCAD	<a href="#">Click Here</a>
9	Industry 4.0	<a href="#">Click Here</a>
10	Article Publication in High Impact Journals and Reference Management	<a href="#">Click Here</a>
11	Tools and Techniques of Scientific Writing and Publishing	<a href="#">Click Here</a>
12	Research Methodology and Data Analysis	<a href="#">Click Here</a>
13	VLSI Design Tools	<a href="#">Click Here</a>
14	Research Methodology in History	<a href="#">Click Here</a>
15	Communication Networks Management by using CISCO Packet Tracer	<a href="#">Click Here</a>
16	Digital Sculpting of Human Anatomy with Zbrush	<a href="#">Click Here</a>



**Kishan Sikhlai Camp organized by school of Agriculture and Lovely Professional University**

Awareness Programme against Stubble Burning: LPU conducted a community-driven event to educate people, particularly farmers, about the harmful effects of burning crop residues after harvest. An awareness rally was organized on September 23, 2022, in collaboration with Govt. of Punjab in nearby villages of LPU to create awareness among the farmers about the adverse effects of stubble burning and educate them about alternative methods of crop residue management. Expert and volunteer talked with the farmers about the impact of stubble burning on soil fertility. The rally encouraged farmers to adopt sustainable agricultural practices that preserve soil health and reduce the need for stubble burning.



**Awareness Programme against Stubble Burning**

**Short Term Course on Innovative Pedagogical Practices in Higher Education**

The program was deliberated on Pedagogical innovations in higher education, Digitization of Learning and Assessment, Individual differences in learners’ personality, learning styles and cultivating emotional intelligence. In this programme participants were not only from university itself, but also from government universities. From 20<sup>th</sup> to 25<sup>th</sup> October 2021 University has organized short term course on Intellectual property rights. This course covered importance of Intellectual property in fostering innovation and protecting creative works and inventions. Participants explored topics such as the process

of obtaining patents and trademarks, the duration of copyrights, and the enforcement of intellectual property rights. Additionally, this course delve into international aspects of intellectual property, addressing global treaties and agreements that govern intellectual property protection. Participants also gained insights into recent developments in intellectual property law and emerging issued in the digital age, such as intellectual property challenges in the age of artificial intelligence and the internet.



### Short term course on Intellectual property rights

Short term course on VLSI design tool was organized by university for both internal and external participants from 27<sup>th</sup> June 2022 to 02<sup>nd</sup> July 2023. The main objective of this course was to provide knowledge to participants about fundamental and practical skills required in the field of VLSI design. VLSI design tools are software programs used by engineers to design and simulate integrated circuits. Main objective of this program was to give fundamental knowledge about steps involved in VLSI design, modelling, synthesis and simulation. Also give introduction to HDL like Verilog and VHDL for designing digital circuits.

### OUTREACH ACTIVITIES

**“Transforming Education, Transforming India,”** has always been the motto for Lovely Professional University. In the endeavour to educate local and nearby people to develop technical skills for a better future, LPU organizes a variety of activities throughout the year in nearby towns and villages. Some successful activities organized under this program are:

#### Disha

Disha is one of the initiatives under outreach activity taken by Lovely Professional University wherein a number of activities have been successfully organized:

The mega events like Third Bharatiya Vigyan Sammelan (BVS), 4 editions of annual mega events Explorica received a tremendous response with a collective footfall of more than 2 lakh school students, connecting 500 plus eminent schools of the region.

These events witnessed the presence of eminent academicians and stakeholders of education.

Participation of more than 70,000 school students from various renowned schools in career counselling sessions incorporated with psychometric test.

Participation of 5000+ teachers and principals of renowned schools attended the workshops and seminars on topics of education relevance.

The annual event like “Knowledge Brainstorm” (KBS), conducted under Transforming Education Awards for school students has also proved to be the most preferred aptitude test for the young minds. KBS has been designed to examine the general skills, critical thinking, analytical skills, and intellectual promise of school students.

To acknowledge the dedicated efforts of teachers and their schools, Lovely Professional University has launched, "Transforming Education Awards" where the students can give credit to their teachers and bring them into limelight.

Another major throwback to the time when LPU facilitated Adobe's programme, 'Adobe Digital Disha' whereby 32,000+ students and 2,000+ faculties of LPU were awarded free 'Adobe Spark' licenses.

## **GUEST LECTURES**

Guest lectures stand out as another highly effective method for enriched learning, offering unique perspectives. In addition to the academic faculty and industry professionals, subject matter experts are routinely extended invitations to impart their knowledge and expertise. They offer valuable insights into real-world applications, challenges, and diverse career prospects, not just for the benefit of LPU's staff and students, but also to engage with external stakeholders from the community, educational institutions, and industrial organizations, among others. Below is the information about some interactions and sessions presented by prominent figures and experts across diverse disciplines.

## **COMPETITIONS AND HACKATHONS**

**Lovely Professional University strives to create an ecosystem where students not only gain theoretical knowledge but also have ample opportunities to apply that knowledge in real-world scenarios. The university is known for fostering a dynamic learning environment where students from various disciplines are encouraged to organize and participate in various national, international competitions, hackathons and skill enhancement events covering wide range of fields such as technology, business, arts, and sports providing students with a platform to showcase their talents, innovative ideas, and problem-solving skills.**

## **CONCLUSION**

The policies, schemes and programmes on which LPU is working in order to accomplish SDG 4 are yielding positive results. All our initiatives at LPU like executive development programmes, extension and outreach activities such as adoption of slums and villages, arranging some development programmes for nearby villages related to new techniques in farming are directed at eradicating poverty through quality education. In future also LPU will continue to work in making India and the world a better place in terms of quality education.

## 5. Gender Equality

### Introduction

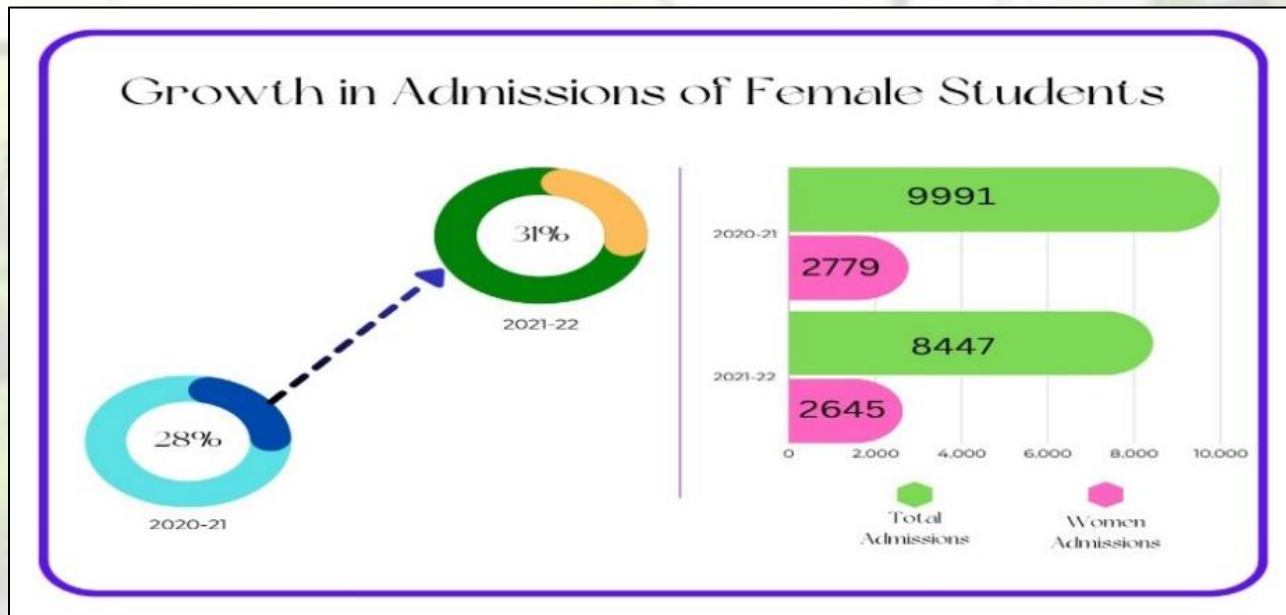
Lovely Professional University is dedicated to encouraging gender equality through policies, processes, programs, and protocols. The university has made significant progress in this area, with a robust, actionable plan for stakeholders. It ensures equal opportunities for staff recruitment, leadership positions, career growth, and student representation in academic programs, committees, and events.

### The Focus Pillars:

LPU is committed to gender equity, ensuring staff and students reach their full potential through active participation. They aim to remove gender-based barriers, leading to prominent levels of women's access and participation in LPU's programs. They have implemented mechanisms to uphold these principles.

### Gender Equity in Admission, Graduation and Employment:

Our goal is to maintain gender diversity in academics and employment, fostering an inclusive environment. We offer free admission processes and support to overcome gender-based obstacles, leading to positive growth in female student representation and increased female pass-out rates in post-graduate programs.



Growth in admission of female students

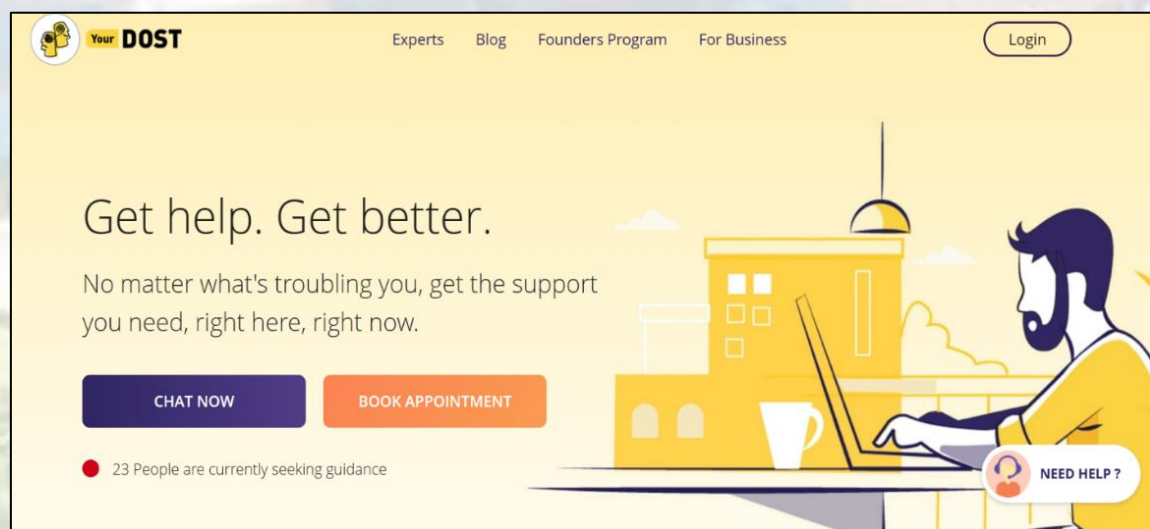
### Access to Scholarships, Mentoring and Tracking:

The Lovely Professional University (LPU) is committed to promoting gender equality in the student admission process. They offer special privileges and schemes to ensure gender parity in university programs. Two categories of scholarships are available for female students: "Single Girl Child" and "Single Mother Child." These scholarships provide financial aid to children in unique situations, such as

single mothers who are widowed, divorced, or have lost their spouses. Students earning equal or less than Rs. 8,00,000 can apply for these scholarships, which make outstanding education affordable. The university also has a mentoring ecosystem that fosters positive relationships, growth, and psychological safety. Induction mentoring starts from the day of induction, with industry professionals, alumni, and senior leadership guiding students.

### **Your DOST: Online Counseling Service:**

The University also has the facility of Your DOST, India's first and largest online psychological health and emotional wellness platform. This initiative brings free advice from more than 900 experts, with complete privacy, confidentiality, and anonymity. It is available to students as well as staff 24x7, 365 days. Counselling and Happiness Cell plans further counseling workshops and seminars based on the analysis of data collected from Your DOST portal addressing the concerned areas.

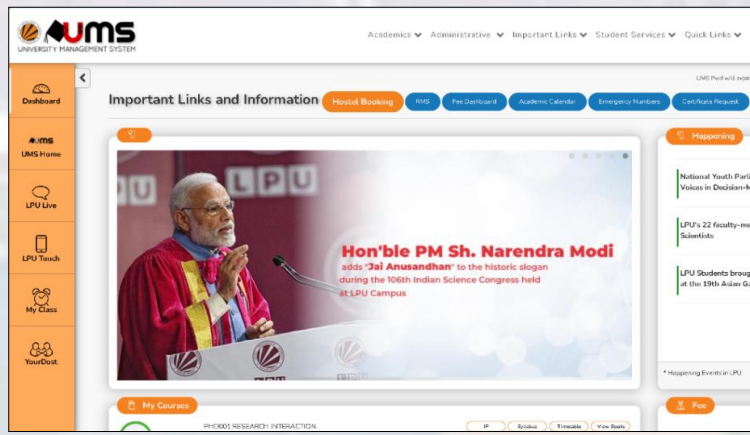
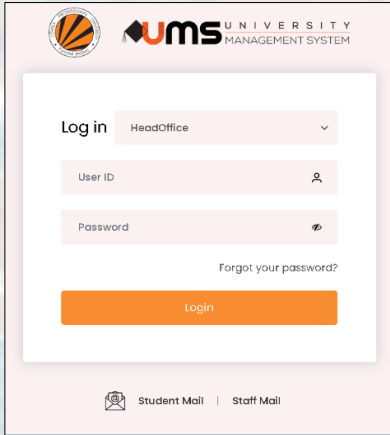


### **Performance Tracking Mechanism:**

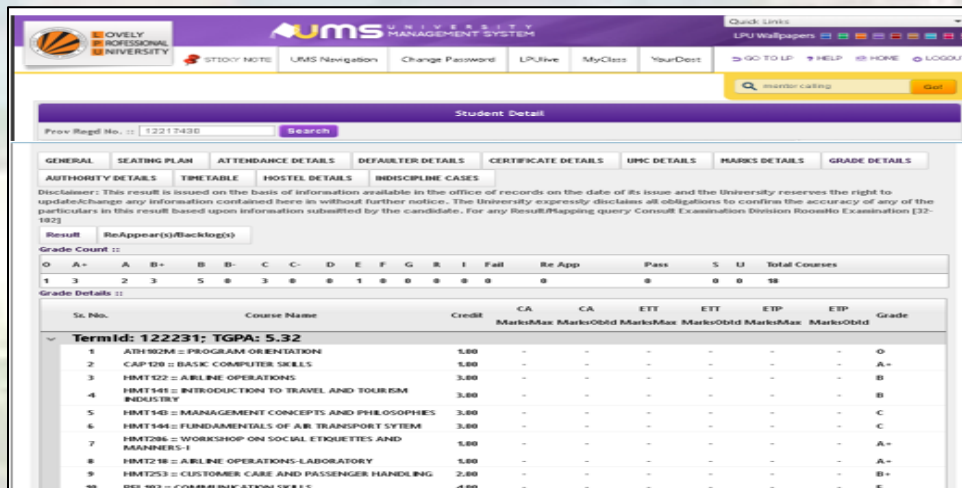
Lovely Professional University as an educational institute is committed to fostering a learning environment to promote gender equality and has developed several measurements to track the learning mechanism to eliminate the gender gap in student participation and performance. These mechanisms enable the university to closely monitor and address gender-based participation, performance, and gaps. We have developed a range of schemes and practices to provide academic assistance to students facing academic challenges, such as remedial classes, self-learning materials, and course reregistration schemes. Through the continuous tracking, assessment, and improvement of these mechanisms, LPU strives to contribute towards bridging the gender gap in education and grow towards gender equity.

LPU has developed a multifaceted and integrated University Management System (UMS) through which the students, parents, and teachers can track the student's performance and progress LIVE at any time. UMS supports all university-wide academic, administrative, and student services.





**UMS Login Interface and dashboard for Students, Parents & Staff**



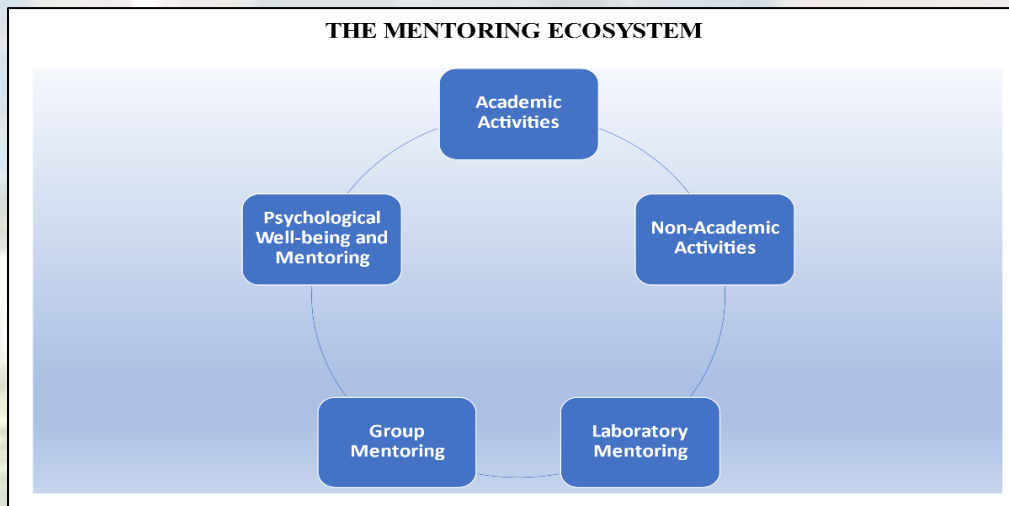
**UMS Dashboard displaying Attendance Details, Grade Details, and other Academic details of the student**

### **Non-Discrimination against women and transgender people:**

Non-discrimination against women and transgender people is a key component of Sustainable Development Goal 5. Lovely Professional University is committed to addressing discrimination in all forms and societal levels to create a more equitable and sustainable future. They have implemented HR and Admission Policies to ensure this. Gender equity efforts aim to ensure equal job opportunities for all individuals, addressing issues like the gender pay gap and workplace discrimination. They promote diversity and inclusion through proactive policies, awareness campaigns, and cultural shifts. LPU has implemented successful programs like 'Nari - Her Right Her Pride', 'Spreading Smiles', and 'Joy of Giving'. They also organized a Women Empowerment Summit in 2022, urging women to be socially, politically, and financially empowered.

## Monitoring and Corrective Action:

LPU is committed to monitoring the access and participation of women in their academic journey. Regular assessments and vulnerability mapping are conducted to identify potential disparities and obstacles. Each school and department monitors admission and retention outcomes to ensure equal opportunities for all students. On-campus childcare services are available for female Ph.D. students and staff with children. Gender sensitization programs, such as the Prevention of Sexual Harassment Act training program, are integral to gender equity initiatives. A street theatre performance on gender sensitivity at the workplace focused on family roles, gender stereotypes, and societal challenges.



## Prime Minister Narendra Modi Invited LPU Alumna at his Residence for Applauding her Jobs-Creating Rural IT Model

Punjab Times News  
Jalandhar, May 11

An MBA Alumna of Lovely Professional University (LPU), Ms Mandeep Kaur was the eminent part of the Sikh delegation that was hosted by Indian Prime Minister Shri Narendra Modi at his Delhi residence. A BBA-MBA Integrated (Marketing) programme student of 2006-2011 batch at LPU; Mandeep Kaur Sidhu is presently an established entrepreneur with her IT services and digital marketing firm, SimbaQuartz. It is running roaring at her native village Tangra, in District Amritsar. Up till now, it has offered white-col-



lar jobs to over 100 IT professionals, like those of managers, consultants, programmers and more. She is a job-provider to young trained IT professionals, particularly from nearby rural areas of Amritsar, J&K and Chandigarh. What started off with three-women staff members only is now a firm with annual turnover of

nearly Rs 3 Crore. Mandeep was on the PM's guest-list in recognition of her efforts for an exemplary project, under which youth from bigger cities are getting global-level job opportunities at her village in India itself. On asking, Mandeep conversed all about her entrepreneurial journey with PM Modi, and apprised him about

her innovative 'Rural IT model' initiative in detail. Elated with the high-profiled meet, LPU alumna Mandeep informs that she was much surprised when she received an invite to be a part of the 'Sikh delegation' at PM Modi's Delhi residence. She shares: "I got the opportunity to talk with PM Modi for three minutes. It was indeed an honour to be part of the delegation from across the world, and to have a face-to-face talk with PM Sir." With Mandeep's courageous entrepreneurial journey, it is commonly considered that India ought to establish 'IT villages' instead of 'IT cities'. Born and brought up in a humble family, it was never easy for Mandeep to be an entrepreneur. After completing

her MBA in distinction from LPU; she did petty administrative jobs. However, instead of migrating to the US along with her husband, she chose to utilise her abilities to be a job creator as per the viewpoint of her alma-mater 'LPU'. In addition, Mandeep is also humane to the core. When the pandemic-lockdown in 2019-20 was imposed throughout the globe, many companies had fired their employees. As Mandeep is of some other clay, she paid salaries to her employees by taking a loan of Rs 30 lakh on herself. She is also running an NGO to serve needy ones. She is also a notified speaker in various colleges of India to motivate and uplift Indian youth.

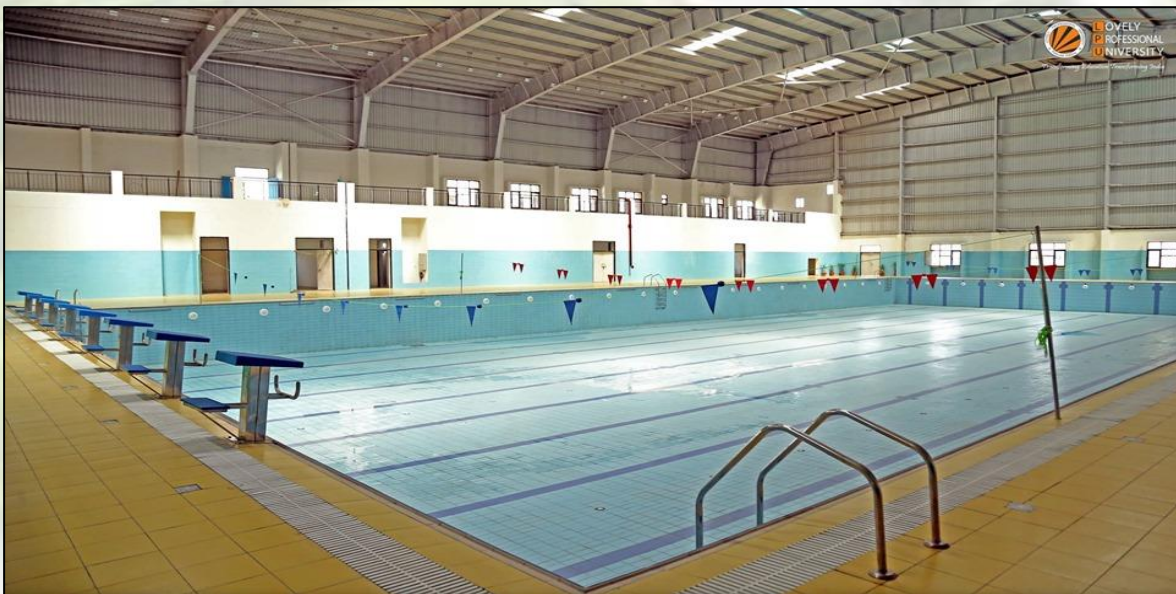
**Prime Minister Narendra Modi invited LPU Alumna for applauding her jobs-creating Rural IT Model**

### **Maternity, Paternity benefits, and Childcare facilities:**

The University of Lahore provides support to women staff members, ensuring a comfortable and progressive workplace experience. Benefits include maternity leave, extra breaks, nutrition, footrests, tables, chairs, priority in queues, exemption from the University Dress Code, changes in classrooms, medical insurance, ESI facility, in-campus crèche facility, and paternity leave. The university also offers a child-centric care and education system, providing creche, daycare, and pre-primary school facilities on its premises. Female students at LPU have exclusive access to a specialized healthcare center, where appointments with a certified female physician specializing in gynecology can be scheduled. The University Health Centre is located at Block 3, Level 2, within the LPU campus.

### **Sports Facilities:**

In its quest for holistic development, the university ensures equal thrust on all aspects of human excellence. The university provides state-of-art sports infrastructure in various sports such as 02 Cricket grounds, 02 Football grounds, 07 Basketball courts, 09 Volleyball courts, 08 Table-Tennis tables, and 14 Badminton courts. There is an indoor stadium meeting the international standards of a Swimming pool, Diving pool, Shooting range, and Squash courts. Sporting talent is nurtured and encouraged by various scholarship schemes exclusively for sports persons.



**Indoor sports facility at LPU**



### **LPU lifted AIU's North Zone Inter-University Kho-Kho (Women) Championship Trophy**

#### **The Outcomes:**

In 2021-22, Lovely Professional University (LPU) has made significant strides in promoting gender equity. The university was recognized as the 'Most Influential Business Woman' by the top magazine 'CEO', and is actively fostering an entrepreneurial mindset among its students through workshops, events, and initiatives. The university also organized a Bootcamp for Women Entrepreneurs under the Enprendia project to promote entrepreneurship among women students. The university collaborated with ERASMUS, an International partner from the Europe Commission, to develop women's entrepreneurship in India through awareness, training, and capacity building. The Entrepreneurship Resource Centre (ERC) was developed to create an entrepreneurial ecosystem, where prominent entrepreneurs shared their insights on entrepreneurship. LPU faculty members conducted workshops and sessions with students regularly under Entrepreneurship Awareness Camps to generate ideas for entrepreneurship and incubation systems. The School of Fashion Design at LPU has been credited with 21 unique patents published in January 2022, focused on making life smooth and secure for the female gender. Female faculty members received 34 awards and accolades from various international and national bodies for outstanding contributions to research, learning and development, sports, and co-curricular activities. LPU has also promoted inclusivity in sports and physical education through the ERASMUS + SPIRIT project for Sports and Physical Education in India, Indonesia, and Sri Lanka. The team visited Spain under the ERASMUS + SPIRIT Project to formulate curricula and life-long learning courses to disseminate knowledge and skills for policy implementation to enhance the inclusivity of inequitably represented segments of society. Furthermore, LPU has established a new world record for the longest line of sanitary pads, promoting menstrual hygiene among women and avoiding social stigmas. The university also

conducted a primary research study on Indian Presidents' attires, highlighting the importance of gender equity in higher education.

### **Conclusion:**

Lovely Professional University aims to achieve UN sustainable development goals of gender equality, ensuring equal access to growth and influence for all individuals. Regularly reviewing policies and guidelines, the university has seen female students, academicians, staff, leaders, and researchers excel in various fields, despite the COVID-19, climate emergency, and economic insecurity crises.

### **Future Plans:**

The organization plans to increase workplace workshops and seminars on workplace sexual harassment prevention and women's workplace glass ceiling. It aims to increase women's participation by 10-15% annually, utilize infrastructure for research and sports, and focus on female student entry and leadership growth opportunities.

## **6. Clean Water and Sanitation**

The university highly acknowledges the vitality of the Sustainable Development Goals (SDGs) as they provide a comprehensive and interconnected blueprint for addressing the world's most pressing challenges such as poverty, health, education, gender equality, and environmental sustainability. Lovely Professional University works meticulously with government bodies, private firms, non-governmental organizations, and community leaders in order to combat poverty, inequality, climate change, and various other critical issues. The university contributes diligently to the achievement of sustainability goals, particularly within the framework of the United Nations Sustainable Development Goals. This includes developing curricula that foster an understanding of sustainability, conducting research and innovation to address sustainability challenges, adopting sustainable campus practices, engaging with local communities to address environmental and social issues, advocating for sustainable policies, and equipping students with the knowledge and skills to contribute to a sustainable future.

Accessible, clean water is of paramount importance as it underpins numerous facets of human well-being and sustainable development. Access to clean water and proper sanitation is fundamental to safeguarding public health, reducing poverty, protecting the environment, and fostering economic growth. Therefore, The Lovely Professional University places a strong emphasis on promoting the sustainable stewardship of water resources. This responsibility is acknowledged through research and instructive undertakings, joint efforts with industry accomplices, careful observing of nearby water utilization, innovative water reusing projects, compelling wastewater treatment, proactive measures to prevent water contamination, and the

integration of water-conscious landscaping and architecture throughout the campus. Also, it implements sustainable water management practices in the campus and engages with local communities to address water and sanitation challenges.



### **LPU Water conservation Infrastructure**

The primary focus of the university is to assure that its community has safe drinking water, hygiene and adequate sanitation. Following this goal, LPU has initiated integrated efforts ensuring commensurate water conservation infrastructure encompassing several specific targets related to water quality, water-use efficiency, wastewater management the automatic sensor-based urinal pot, semi-automatic minimum water usage push button taps, two button toilet flush water tanks, water saving spray jet nozzles etc. for providing sufficient water facilities. It also has introduced various processes and guidelines such as the water harvesting bores which are certified by Department of Water resources. Also, the water distribution system at LPU facilitates its mission of addressing water-related ecosystems to achieve a more sustainable and equitable future.



**LPU adequate infrastructure with minimum wastage of clean water**

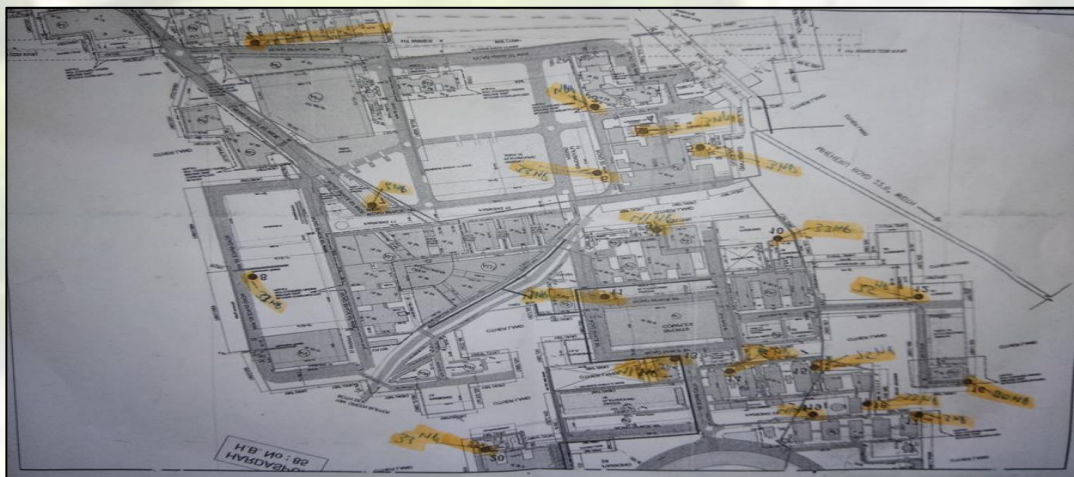
Water Management policies at LPU serve as a framework for regulating and optimizing the use of water resources, ensuring equitable access to clean water, and promoting efficient sanitation practices. By establishing advanced irrigation systems and technologies, treating and recycling the water help safeguard water sources from contamination and depletion. The university has taken commendable efforts to equip the provision of fresh water facilities and the treatment of water by developing sewage Treatment Plants, adequate network of water pipes and treating and recycling the water.

Consequently, the treated water is being recycled and reused for irrigation and horticulture, and toilet flushing. Also, the sludge obtained as a byproduct of the water treatment process is used as manure in horticulture. Loft tanks are also installed at wastewater outlets in order to maintain water quality.



**Cultivation of plants by Drip Irrigation & Loft water tank for pretreatment of water**

The university is equipped with 32 drinking water bores ensuring the supply of fresh water to its community. In addition, there are 32 Digital water meters, installed on each of these waters bores, to measure the volume of water extracted from the ground, using sustainable water extraction technologies



**LPU Govt. Approved Drinking Water Bores**

Furthermore, the university has its own solar water pumping system ensuring adequate and clean drinking water supply. It has also installed more than 350 water coolers free & clean drinking water-refill stations across the campus.



**Solar water pumping system & Water coolers across campus**

The sludge obtained as a byproduct of the water treatment process is used as manure in horticulture. By raising awareness through informative signages at various strategic locations across the campus, university is creating a more informed and motivated community that actively contributes to the realization of Sustainable Development Goal 6, promoting clean water and sanitation for all



**Manure for horticulture from the sludge collected by STP treated water**





**Signages installed at various locations in Campus promoting conservation of water**

Its rainwater harvesting practices following the strict parameters established and approved by the Department of Water Resources, under the Ministry of Jal Shakti, Government of India acts as an icing on the cake towards fulfilling the sustainable development goals.



**Rain water harvesting borse in the Campus**

## **LPU's SDG-Aligned Research Projects for Society's Well-being and empowering innovation for a Sustainable Future**

It is well said that research drives innovation, generates essential knowledge, and provides evidence-based solutions to address the complexities. Following this notion, LPU provides required support to faculty and students to research and innovation which results that university faculty innovates and invents a cost-effective **Bio-filter for the Removal of Permanent Hardness from Hard Water** with registered patent number IN201711025361

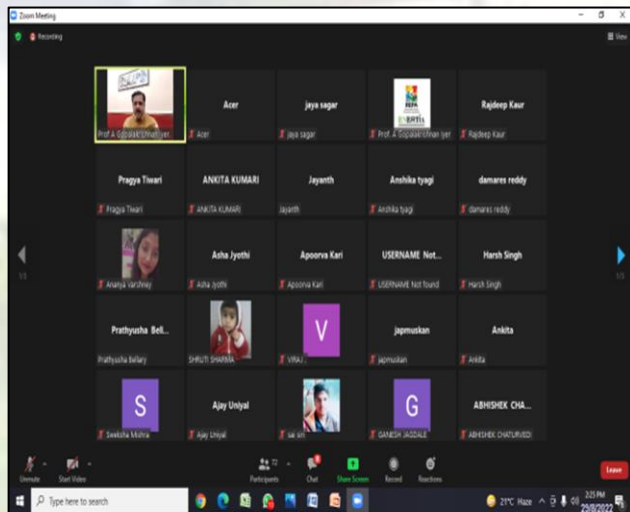
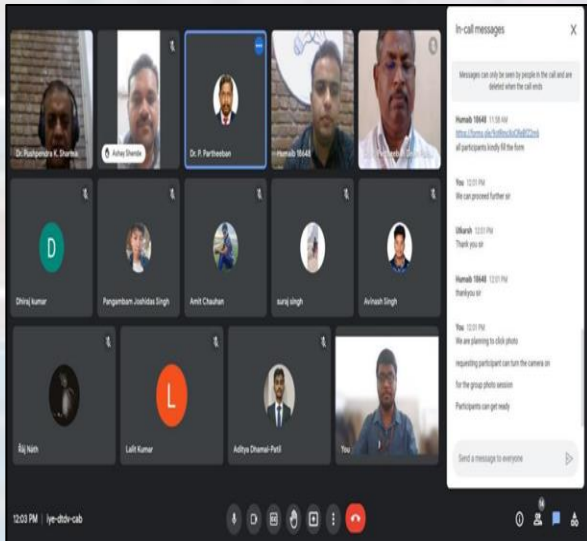


### **“Bio-Filter for the permanent removal of hardness from water by the LPU”**

Apart from these significant endeavors, the university also fosters **SDG-Driven Campus Engagement Activities** such as workshop, seminars, and guest lectures as LPU believes that these activities provide opportunities for experts, researchers, and practitioners to share knowledge, best practices, and innovative solutions in the field of water and sanitation.

#### **Following are the activities carried out in Campus:**

- **Water quality analysis using modern tools**
- **"Water Reuse and Reclamation: Sustainable Solutions for Resource Conservation"**
- **Comprehensive Environmental Restoration, Groundwater Recharge, and Potable Water Reuse Initiative**
- **"Integrated Water Reuse Planning and Dual Distribution Systems with a Focus on Storage Requirements**



### Glimpses of the activities conducted in the campus

Additionally, outreach activities play a dynamic force in the global pursuit of SDG 6 as they empower individuals, communities, and organizations to become active stakeholders in the endeavor to ensure clean water and sanitation for all. In the alignment with this notion, LPU students organized remarkable social trips to visit natural disaster affected areas during which they distributed clean drinking water and nutritious food products to the villagers, aiming not only to quench their thirst and hunger but also to contribute to their overall well-being. Thus, this exemplifies that right education can bring a significant difference in the lives of necessitous.



**The region after flood -  
Water breakout following damage to a nearby dam.**



**Lpu students team distributing basic needs to the affected villagers**



#### **LPU team field survey at local levels**

Also, the off-campus water conservation initiatives while implementing a project involving the installation of water-cleaning net, beneath the root zones of local water body “creek” affirm the mitigation of toxicity in water.



**Local water body “creek” cleaning activity by students of LPU**



**Net floaters in creek to clean the water body**

Emphasizing on the interconnectedness of individual behavior and its consequences on the collective well-being of society, LPU conducts outreach awareness campaigns and session as they serve as powerful platforms for educating and engaging residents on critical issues, such as clean water, sanitation, healthcare, education, and poverty alleviation.

Following are the list of outreach organized sessions by the university

- **Community Awareness for Water Conservation"**
- **"Water Preservation by transitioning to Water-Efficient Fixtures and Fittings"**
- **"Industrial Pollution Awareness and Prevention Seminar"**
- **"Water Conservation and Gardening Workshop for School Children"**

Through, these sessions create a sense of shared responsibility, foster a collaborative spirit, and empower individuals to take ownership of its development.



### **Water Conservation and Gardening Workshop for School Children**

Hence, these informative sessions and interactive dialogues, the university encourages responsible water use, efficient sanitation practices, and greater environmental stewardship which eventually connect the dots of achieving the sustainable development goal of clean water and sanitation.



### **Students with Industry Owners**

Adding to these measures, the university extends its hands to the industry & governments while developing water cleaning projects which involve assessing of fluoride contamination in ground water in Punjab, using Geographic information system (GIS), satellite technologies, image processing, and machine learning-based techniques to provide clean water to the society. Thus, these projects laid the

foundation of sustainable development goal of providing quality water to the community. The major aspects of the projects cover primary components of water quality pertaining to distribution, properties of water, and different standards of water quality, waste water collection and treatment techniques.



**Identified Waste water bore at local place**

In essence, the pursuit of Sustainable Development Goal 6, ensuring clean water and sanitation for all, represents an ongoing journey that demands our unwavering commitment. The significant progress made thus far through cutting-edge research and educational endeavors, collaborations with industry partners, meticulous monitoring of on-campus water usage, innovative water recycling projects, effective wastewater treatment, innovative research projects, proactive measures to avert water system pollution, and water conservation infrastructure across the campus. By actively engaging in various initiatives, Lovely Professional University is not only aligning itself with the global sustainability agenda but also setting a commendable example for other educational institutions and communities with its fruitful approaches such as result-oriented measures, incorporation of sustainable practices into its curriculum to inspire future generations, considerable steps to contribute to local water conservation and sanitation goals, collaboration with various stakeholders to find practical solutions to water-related challenges. However, the future endeavors of the university are strengthening and augmenting its water conservation campaigns, behavioral change programs, partnerships, rainwater harvesting, water-efficient landscaping, water metering, sanitation facilities, wastewater treatment, curriculum integration: research and innovation at the best level.

## **7. Affordable and Clean Energy**

Lovely Professional University (LPU) stands as a beacon of commitment to Sustainable Development Goal 7 set by the United Nations. As the world strives for affordable and clean energy, LPU takes a

pioneering stance in aligning its vision with this global objective. With a resolute dedication to renewable energy, energy-efficient practices, and sustainability management, LPU emerges as a proactive contributor to a future powered by responsible and accessible energy sources. LPU not only echoes the UN's call for action but actively leads the way towards a more sustainable and energy-conscious world.

The Indian government aims to achieve 500 GW of renewable energy capacity by 2030, marking a shift from fossil fuels to sustainable energy in the 21st century. Lovely Professional University (LPU) aligns with this vision, actively engaging in clean energy initiatives, academic programs, and research. In line with the United Nations' sustainability goals, Lovely Professional University (LPU) demonstrates its commitment through the installation of a 1.1 MW rooftop solar PV plant in 2018. This initiative aligns with LPU's dedication to renewable energy, complemented by the potential development of a 7.5 MW solar power plant. The university further reinforces its commitment to sustainability by establishing green infrastructure buildings with energy and environmental design, actively contributing to conservation and environmental sustainability in pursuit of SDG goals.



### **Solar Power Plant**

As India's economy expands, energy consumption grows at a rate of 7 to 10% annually, fueled by the need for development. Acknowledging the environmental impact of carbon-based fossil fuels, there is a crucial call for innovative and sustainable energy solutions. Lovely Professional University (LPU)



addresses this challenge through a comprehensive approach, integrating research, teaching, and operational practices to promote resource conservation and sustainability. LPU offers 115 courses for undergraduates, postgraduates, and research studies, benefiting over 8000 students. These courses focus on cultivating skills for clean and affordable energy, aligning with the United Nations development goals. Notable programs include Solar Energy Technology, Renewable Energy and Green Technology, Energy Conservation, and Sustainable Development and Livelihood.

Furthermore, LPU integrates courses on the green economy and sustainability, such as 'Renewable Energy Systems,' 'Sustainability Ecology and Landscape,' and 'Sustainability and Energy Efficiency' into its undergraduate programs. These courses incorporate live projects as a vital component. The School of Bioengineering and Biosciences has established an interdisciplinary team of undergraduate and postgraduate students dedicated to green economy initiatives, focusing on extracting value products from lignocellulosic waste for applications like antimicrobials and biofuel production. The University currently has 3 cubic meter operating biogas systems across the campus to process kitchen waste. LPU is actively engaged in small-scale sustainable power projects, emphasizing its commitment to increasing the use of clean energy sources. LPU is actively dedicated to expanding the adoption of clean energy sources, currently involved in several small-scale sustainable power projects. The university is making significant strides in promoting green energy, with various companies recognizing and supporting its efforts. Notably, faculty members at the university have received project awards from multiple companies, amounting to a total of Rs. 59.15 lakhs. This financial support underscores the recognition and endorsement of the university's initiatives in the realm of sustainable and green energy projects.

LPU is committed to achieving carbon neutrality by 2029, taking significant steps towards sustainability through a pledge to 100% renewable energy. To realize this commitment, LPU has instituted GREEN AND SUSTAINABLE CAMPUS guidelines, offering a comprehensive roadmap for sustainable development. These guidelines encompass energy conservation, renewable energy, waste management, water conservation, green commuting, support for land ecosystems, and educational programs. Additionally, the university has implemented a Framework on Sustainable Procurement and Investment, directing procurement activities toward environmentally responsible and socially sustainable practices.



### **Green and Sustainable Campus**

Lovely Professional University (LPU) champions sustainability through various initiatives, including the installation of three 5 horsepower solar-based irrigation systems for efficient orchard watering. To mitigate carbon emissions, the university utilizes solar-powered transport, featuring 36 battery-powered e-rickshaws connecting campus buildings. LPU also boasts an energy-efficient building, designed by specialized architects, resulting in lower energy consumption than a 5-star rated building. Three amphitheatres conserve energy by hosting events in natural light, and the university operates solar-powered buses and 36 e-rickshaws since 2017. Additionally, 10 e-golf karts with improved capacity contribute to improved air quality at the micro-level, demonstrating LPU's commitment to sustainability.



### **Battery Powered E-Rickshaws**

Lovely Professional University addresses environmental concerns by utilizing organic waste to generate renewable energy through three 3 cubic meter biogas systems on campus. These systems efficiently process kitchen waste, reducing greenhouse gas emissions and pollution to waterways. The university's commitment to energy efficiency is evident in its Energy Performance Index (EPI) of +33.42 kWh/m<sup>2</sup>/year, significantly lower than the Indian standard for a 5-star rated building. This showcases LPU's effective building management and operation.

The University conducts yearly Environment and Energy audits to assess performance, identify areas of high energy wastage, and develop strategies for greater sustainability. These audits play a pivotal role in addressing efficiency challenges, contributing to environmentally responsible and financially sound operations. To slash energy consumption, Lovely Professional University has implemented strategic measures, including:

*A. Replacing conventional lights with energy-efficient LED lights in high-usage areas.*

*B. Substituting high-power, inefficient lights like mercury vapour lamps with sodium vapour and metal halide-based lamps.*

*C. Utilizing star-rated equipment, with 43% of campus air conditioners boasting star ratings and undergoing regular maintenance for optimal efficiency.*

*D. Incorporating energy-efficient lifts from M/s OTIS, equipped with Re Gen drive for up to 75% energy savings compared to conventional models; 53 out of 83 lifts on campus feature regenerative braking systems.*

*E. Raising awareness among end-users with stickers near switchboards, promoting responsible electricity use.*

*F. Implementing energy-saving measures, such as turning off 50% of street lights at 10:00 p.m. and an additional 30% at 12:00 a.m.*

*G. Providing a bicycle facility with nearly 600 bicycles available at 15+ stands across campus, serving around 4000 students daily.*

*H. Maintaining multiple parking areas to ensure proper traffic discipline within the campus.*

*I. Promoting vehicle pooling among faculty and staff for efficient transportation to the university campus.*

LPU is leading a noteworthy local education program emphasizing the vital role of energy efficiency and clean energy. LPU acknowledges the urgent need to address environmental challenges locally and globally. This program aims to educate and involve the community in adopting sustainable energy practices. Leveraging its academic expertise, LPU provides well-researched content, knowledgeable faculty, and cutting-edge resources. This initiative underscores LPU's commitment to sustainable development, serving as a model for the wider region and beyond.

Lovely Professional University envisions transforming into a green and sustainable campus by 2030, aligning with national and international guidelines. Key Performance Indicators (KPIs) for this vision include reducing conventional energy use by 30%, identifying high energy consumption zones, adhering to building standards, updating infrastructure to energy-efficient green buildings, optimizing material flows and waste management for enhanced value creation, promoting 100% technology-driven green commuting, efficient water resource management with a 25% conservation target, implementing water recycling techniques, conducting training on recyclable materials and waste management, conserving biodiversity and cultural heritage, collaborating with NGOs and research organizations for sustainable energy sources, conducting regular awareness programs, establishing a Centre of Excellence in Clean Energy, and fostering collaborative research with industries for efficient renewable energy systems. These initiatives showcase LPU's commitment to a sustainable and eco-friendly future.

## **8. Decent work and economic growth**

In the dynamic landscape of higher education, Lovely Professional University (LPU) stands out as an exemplary institution, dedicated to fostering a symbiotic relationship between decent work practices and economic growth. In its annual report for the year 2021-22, LPU showcases a multifaceted approach that empowers its stakeholders, including employees, students, alumni, and service providers, to contribute

meaningfully to the organizational and individual development. This commitment is demonstrated through the university's innovative educational programs, groundbreaking research, strategic partnerships with industries, and a comprehensive framework that ensures the well-being and satisfaction of its workforce.

### **Remuneration, Rewards, Recognition, and Engagement:**

LPU's R3 E Program encapsulates its commitment to sustained economic growth and inclusive employment. The university emphasizes fair remuneration, rewards exemplary contributions, and fosters meaningful engagement among employees. A meticulously structured pay scale framework not only motivates the workforce but also ensures comprehensive institutional and societal advancement. LPU's institutionalized rewards and recognition framework applauds outstanding achievements, inspiring a culture of excellence and innovation. Incentives for staff based on exceptional performance further recognize dedication and commitment.



### **Employee Engagement Initiatives:**

LPU prioritizes fostering personal connections with its staff through various events such as the Annual Conference 'Sanidhya,' monthly staff birthday celebrations, and ceremonies welcoming newlyweds and newborns. Rakhi and Rangoli making competitions promote creativity and cultural bonding. The university also engages in philanthropic endeavors, reinforcing a culture of compassion and empathy among its staff members.



### **Equity, Diversity, and Inclusion Practices:**

LPU upholds the principles of equity, ensuring zero tolerance for discrimination based on religion, gender, or age. The university actively works to measure and eliminate the Gender Pay Gap, emphasizing data-driven analysis and proactive policies. Transparent processes, accessible grievance channels, and ethical labor standards underscore LPU's commitment to justice and inclusivity. The diverse student population enriches the university's environment, promoting cross-cultural understanding and global perspectives.

### **Quality of Work Life:**

LPU's dedication to staff welfare goes beyond the ordinary. The university provides state-of-the-art workplace facilities, including well-equipped offices and comfortable residential options. On-campus crèche and pre-primary school support working parents, emphasizing holistic child development. An extensive array of sports and recreational facilities, coupled with robust security measures, ensures a safe and enriching environment for everyone.

### **Health and Well-being:**

LPU's Uni Health Centre epitomizes wellness and care, providing high-quality healthcare services backed by cutting-edge technology and a patient-centric approach. The university's commitment to well-being is further demonstrated through world-class infrastructure, including plazas, exhibition spaces, auditoriums, and amphitheatres, catering to various needs of its stakeholders.

In summary, LPU's holistic approach towards decent work practices and economic growth stands as a testament to its commitment to fostering excellence, empowerment, and inclusivity. Through its

comprehensive initiatives, engaging events, and focus on employee well-being, LPU creates a vibrant and harmonious community, driving both individual and collective success.

## **9. Industry Innovation and Infrastructure**

### **INTRODUCTION**

Lovely Professional University is committed towards fostering innovation for supporting sustainable industrialization and building resilient infrastructure. University commitment is completely reflected in identified research areas, academic initiatives, and activities helping in developing the culture of innovation in the campus. Keeping in mind, the intent behind SDG 9 of 3i – infrastructure, industrialization & innovation. LPU focuses on the approach for driving innovation process within, not only to “do the things right” but also to "do the right things right", to achieve visible and tangible outcomes.

The organization will achieve improved financial performance by addressing new demands, distinguishing the products and services, and changing the business lines to new procedures as a result of LPU researchers' focus on Lean Six Sigma. Thus, this will lead to the introduction of innovations and sustainable industrial growth.

### **Academic Initiatives**

Various academic approaches have been used by the institution to empower students and cultivate mindsets to ideate, build inexpensive solutions for local needs and challenges relevant to SDGs, and further incubate their own start-ups. LPU provides a specialized academic program at the bachelor's and master's levels. There are well-structured engineering programs as well as open minors in sustainable development. Starting an innovative firm necessitates a set of talents. Everyone wishes to explore the unknown, but few have the aptitude or bravery to do so. Those with an academic background in Innovation and Entrepreneurship have the knowledge and expertise that businesses require to turn ideas into possibilities and satisfy new needs. LPU provides students with specialist courses in Innovation and Design Thinking, Family Business, Entrepreneurship Development, and Boot Camp. These programs improve graduates' communication and reasoning skills by focusing on developing plans in order to complete the task. Students discover the processes to successful innovation and are able to create, sell, and launch new business concepts. University offers around 75+ multidisciplinary minors that encourage students to choose SDG-related topics to solve for their Capstone and Dissertation Projects.



Some glimpses of BOYD class rooms, seminar halls and State of Art Laboratories



Solar Powered Driverless Bus

**Projects related to innovation**

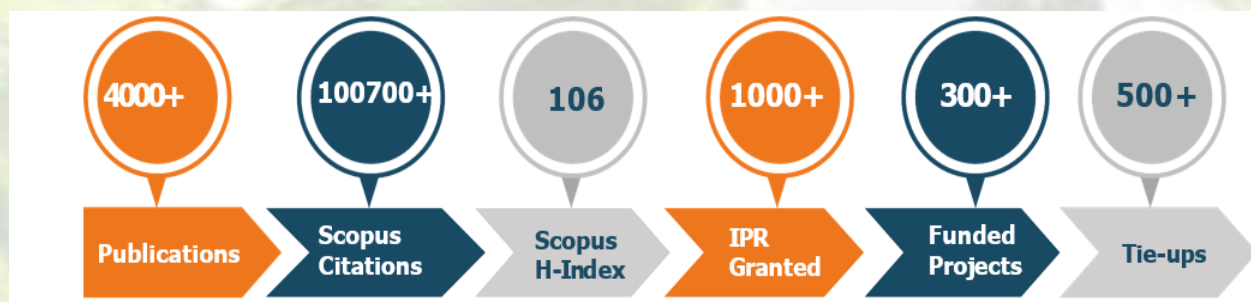
S.No	Project Tittle	Link
1.	Five Hole Five Probe	<a href="#">Click here</a>
2.	Mileage enhancing kit	<a href="#">Click here</a>
3.	Project N	<a href="#">Click here</a>



S.No	Project Tittle	Link
4.	Radial Drone	<a href="#">Click here</a>

### Research Projects

Sr. No	Name of the Project
1	Thermal Energy Storage for Food/Grain Drying with CST/RE to Lower Pollution
2	Making Sodium the new Lithium: Stabilizing Oxygen Redox in High-Energy Sodium-ion Batteries through Accelerating Materials Discovery
3	Antitubercular activity of novel coumarin hydrazide derivatives via ATP synthase inhibition: Design, synthesis and biological assesment
4	An Innovative Green Technology for Treating Municipal and Industrial Wastewater entering Rivers and Streams
5	Self nano emulsifying drug delivery systems (SNEDDS) for oral delivery of polypeptide - k for effective management of diabetes mellitus: Design and optimization



### Prominent Academic Program in Collaboration with Industries

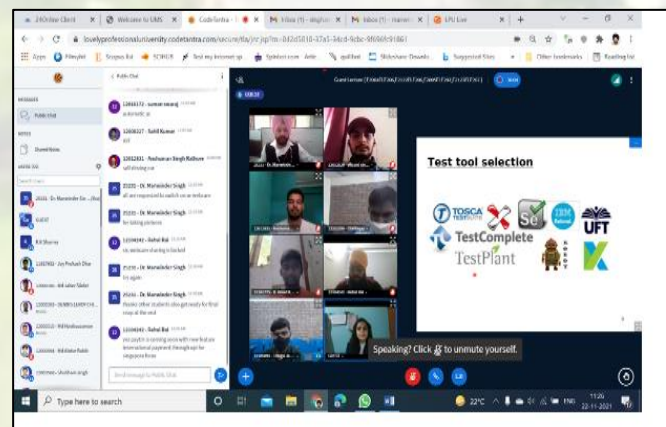
- B.Tech. (Computer Science and Engg. - Data Science with ML) in tie up with upGrad
- B.Tech. (Computer Science and Engineering - Big Data Analytics) in tie up with IBM
- B.Tech. (Computer Science and Engg.- Cloud Computing) in tie up with Google-Cloud
- B.Tech. (Computer Science and Engg.- User Experinece (UX)/User Interface (UI)) in tie up with Imaging-XP.
- B.Tech. (Computer Science and Engg. - DevOps (Software Development and IT Operations)) in tie up with Xebia
- B.Tech. (Electronics and Communication Engg. - Internet of Things) in tie up with Intel

- B.Tech. (Automobile Engineering - Electric Vehicle Design) in tie up with SIEMENS
- BBA (Financial Markets) in tie up with NSE
- BBA (International Finance) in tie up with IMA
- BBA (Business Analytics) in tie up with IOA
- B.Com (Management Accounting and International Finance) in tie up with IMA
- BCA (Data Analytics) in tie up with IBM
- MBA (Business Analytics) in tie up with KPMG
- MBA (Financial Markets) in tie up with NSE
- MBA (Supply Chain & Logistics) in tie up with Safeducate
- M.Pharm (Pharmacy Practice) in tie up with CMC, Ludhiana
- M.Sc. (Clinical Embryology) in tie up with Cooper Surgical

<b>Sr.no</b>	<b>List of Conferences</b>
1	National conference on Recent Trends in Biomedical Sciences (RTBS-2020)
2	International Conference on Plant Physiology and Biotechnology
3	2nd International Conference on Functional Materials, Manufacturing and Performances (ICFMMP-2021)
4	KATHLEEN 100- 5th International Conference on Computing Sciences (ICCS-2021)
5	International Conference on Sustainability Life on Earth 2021 (ICS-LOE 2021)
6	International Conference on Recent Trends in Smart and Sustainable Agriculture for Food Security (SSAFS – 2022)
7	Industry 5.0 Human Touch, Innovation and Efficiency
8	3rd International Conference on Sustainable Developmental Goals and Management Practices
9	International Conference on Materials for Emerging Technologies-2021 (ICMET-21)
10	4th International Conference on Intelligent Circuits and Systems (ICICS 2022)
11	International Conference on Revitalizing Social Institutions for Peace, Justice and Environmental Protection
12	First International Conference on Innovation and Intellectual Property Rights
13	International Conference on Small Satellites
14	3rd International Conference on Functional Materials, Manufacturing and Performances (ICFMMP) Event Ended

Sr.no	List of Conferences
15	International Conference on Blockchain for Business: Embracing Digital Disruptions
16	1st International Conference on Recent Advances in Computing Sciences – 2022 (RACS-2022)
17	3rd International Conference of Pharmacy (ICP-2022)
18	Booth100: 6th International joint conference on computing sciences (ICCS-2022)
19	International Conference on Product Design, ICPOD-2022
20	International Conference of Bioengineering and Biosciences-2022 (ICBB-2022)
21	International Conference Business in a Turbulent World: Keeping Connection Alive
22	International Conference on Feminine Hygiene Management- Beyond Taboo (ICFHM-2022)
23	National Conference on Forensic Advancements & Technological Explorations [FATE 2022]: transcending disciplines
24	International Conference on Advances in Material Science and Technology (ICAMST-2022)

### Guest Lectures on innovation

## **Conclusion**

LPU process and policies are in sync with the SDG9 goal to promote innovation among students and academicians to identify and solve societal/industrial problems with the prime focus on sustainability. LPU is all geared up for building sustainable culture of innovation and technology transfer for taking idea from mind to market. This has resulted in identification of basic needs and could develop frugal and viable products for benefit of society.

### **10. Reduced Inequalities**

The University understands and recognizes the importance of Sustainable Development Goals and is firmly committed to particularly focus on SDG 10, which aims to decrease disparities both among and within nations. LPU works in proximity with private and public domains and various organizations in order to form a congenial relationship vis-à-vis sustainable development. The university is highly committed to strengthen its social and civic duties and time and again embarks on new passages to uplift the spirit of sustainable goals.

The Varsity endorses the UN's undertaking to "Leave No One Behind" in which various countries are working in collaboration to provide the fundamental amenities in order to gain advancement in their lives. The University works in tandem with myriad internationally acclaimed institutions and thereby provides its students holistic education while upholding the notion of accessibility of resources to all and sundry. LPU has proud association with multifarious governmental, non-governmental and local organizations to ensure a potent education ambience and also pays heed to foster sustainable inclusivity in the society. In addition to this, the university has various student organizations which work wholeheartedly in ensuring community development in order to bring a sanguine change in the society. The university categorically involves its students in multitude activities pertaining to sustainable development and also perpetually works on the equality dynamics that play a crucial role in obtaining desired results.

In a nutshell, to nurture the academic capabilities of its students, the university keeps no stone unturned to provide a diverse platform to its students in which they can not only upskill themselves in academia but also comprehend the environmental set up that can boost the sustainable goals in equal measures. The university profoundly understands the need to collaborate with public and corporate sectors; civil society etc. to ensure that the planet earth can be in its best form and the future generations can harness it further.

### **ACADEMIC INITIATIVES:**

At present, LPU offers an impressive array of over 150 programs spanning more than 40 disciplines, catering to students at the diploma, undergraduate, graduate, and doctoral levels. LPU maintains a

dedicated team of exceptionally qualified educators who custom-tailor the curricula to align with the precise needs of these industries. The university not only extends scholarships to Indian students but also welcomes numerous outstanding international students from the whole world, thus ensuring equitable access to education for all. Furthermore, LPU provides the international students with the opportunity to work on campus and multinational corporations frequently recruit students from diverse countries. Approximately 8% of LPU's student population hails from low-income and middle-income countries.

Lovely Professional University is deeply committed to instill in its students an awareness of the United Nations' Sustainable Development Goals (SDGs). The curriculum development process involves aligning courses across various programs with the SDGs. The university ensures a high standard of education while crafting and delivering these courses, focusing on inclusivity, equity and fostering a culture of lifelong learning among students.

#### **ADMISSION POLICY:**

On its website, Lovely Professional University makes its **non-discriminatory admissions policy** open to the public. The university is firmly committed to ensure that financial limitations should not hinder a student's access to high-quality education. Therefore, the university has introduced a **Scholarship Scheme** designed to nurture the talents of students who may have hidden potential due to financial constraints. Scholarships are available for all programs offered by the university, spanning from diploma courses to Ph.D. programs. Apart from the available scholarships for students, LPU offers financial aid to individuals from under-privileged groups like financial aid to persons with certain disability, need-based scholarship and scholarship to transgenders and orphans.

LPU hosts over 2600 students from developing countries. Every year, the university awards LPU scholarships to top-performing international students, covering their tuition fees throughout the standard program duration. This year, numerous students representing various nations such as Bangladesh, Sudan, Nepal, Sri Lanka, Bhutan, Yemen, Kenya, Ghana, Maldives, Malawi and more, have enrolled in the university.

The University has the following **policies regarding anti-discrimination and anti-harassment-**

1. Anti-Sexual Harassment Policy
2. Student Grievance Redressal Policy
3. Anti-Ragging Policy

There are **mentorship guidelines for students**. Student counselling is done by Faculty. Around 20 students are given to 1 faculty member. Parent teacher meetings are there to counsel students' parents for holistic support. Parents have been made an integral part of this program through their participation in:

- Parent Teacher Meetings-Virtually and in-person
- Freshmen Induction
- Convocation
- Track progress of the ward through LPU Touch App and UMS

**Counselling sessions and remedial classes** are arranged on regular basis for national as well as international students. Along with that, **Psychological Well-being and Happiness Program, Happiness Coaching, Student and Staff Counselling Services through YourDost App, Disability Support Office** are there to assist the individuals with disability to have a comfortable and safe environment inside the University campus.

Campus facilities are available for people with disabilities to empower the students with spinal cord injury. Moreover, there are Wheelchair-Friendly Infrastructure, Personal Assistance and Support, Residential Facility On Scholarship, Ramps and Railings, Specially-abled rest rooms, JAWS talking software, Audio Books and Sign Language, Lifts for disabled students and staff, Sign Language Dictionary, Sign Language Dictionary available in Library.

**Campus Engagement Activities** are there like Sports facility, Fashion Shows to showcase the talent and Passion for Fashion, Sensitization session by students, Participation in various University events.

## **11. Sustainable Cities and Communities**

### **Introduction**

LPU acknowledges its commitment to every Indian citizen and the continued population expansion in the world. Building contemporary, sustainable cities is essential to accommodate this. We need to apply smart urban design that promotes robust, safe, and inexpensive communities with green, culturally rich living spaces if we want to guarantee everyone's survival and continued success. From its founding, LPU has actively supported the preservation of the nation's culture as an essential component of a developing country. Through its curriculum, the institution focuses on delivering high-quality education by teaching students how to develop contemporary, sustainable cities while also conserving the nation's cultural heritage.

The goal of this educational programme is to give students the skills they need to support the effort to build sustainable communities and cities. Students are encouraged to work towards enhancing the "quality-of-life" of regional cities through practical projects and knowledge sharing. This method takes into account the opinions of stakeholders, officials, and locals. The notion of habitability, which encompasses several aspects of livelihoods, has a favourable impact on a number of areas, including food security, utilities, transportation, health-care, the environment, education, housing, central and local government, safety, security, and recreational and social activities. This all-encompassing method offers insightful information on urban life and what's needed to create livable regional cities.

Our practical education strategy, which involves working with the industry to understand the sustainable needs on the ground and incorporating them into our curriculum so that students can learn about practical needs as well as actively engage and contribute their innovative ideas to create sustainable building designs with respect to Architect Division, is what makes our campus sustainable building designs possible and helps us achieve our goal of becoming a model of sustainable livability. This goal is in line with the overarching goal of developing inclusive, safe, resilient, and sustainable cities and human settlements.

These buildings are a model for sustainability and safety in India. They are departmental buildings that follow HVAC regulations and use recycled materials, such as gypsum boards, for partition walls. Used wooden waste boards are used into the ceiling design. The sports complex was thoughtfully designed to optimize airflow and natural light. The goal of auditorium construction is to maintain a suitable indoor air quality and offer a high degree of comfort. The campus's sustainable features, like the cleverly designed kiosks that take up little space in open areas and consume little electricity to maintain a clean and hygienic environment—a shopping centre surrounded by lush green spaces—are made possible by our outstanding architectural design.

We have taken considerable care to build well-constructed paver roadways to enable easy automobile traffic alongside safe and comfortable routes for people. Because interlocking permeable pavers are used in the construction of these roads, rainwater can percolate through, replenishing groundwater and preserving water resources by recycling concrete pavers. Additionally, students from various countries enrolling in LPU's diploma and degree programmes continue to come from different states in India. Our campus is more than simply a place of learning; it also has rich art galleries, extensive libraries, and a number of buildings that are decked out with eye-catching artwork, installations, paintings, and sculptures. Moreover, LPU is essential to preserving the area's overall environmental equilibrium.

As a steward of sustainable development, the university is directed by a certain set of rules, procedures for implementation, and community involvement. The LPU campus is a true representation of our steadfast dedication to the growth of sustainable cities. The Environmental Science programmes offered by LPU incorporate fieldwork, hands-on experience, and exposure to industry. Addressing the difficulties of striking a balance between ecological and environmental constraints and economic growth is a key focus of these programs. Together with the region's abundant agricultural and woodland environs, LPU's campus offers students a distinctive blend of natural areas that provide for an engaging and comprehensive learning environment.

### **Academic Initiatives**

collaborating on programs for sustainable development, which include online and classroom education. The new version of this programme is intended to align with the UN 2030's emphasis on Sustainable Development Goals. In order to accomplish these goals, it underscores the need of acting globally and the need for new governance models, encouraging cooperation among diverse stakeholders both locally and globally. Furthermore, LPU offers a variety of programs in architecture and urban planning, ranging from diploma to doctorate degrees. These are designed to prepare the next generation of architects and city planners, who will be essential in creating the country's sustainable and effective urban systems. The faculty is very knowledgeable and actively involved in writing research articles about sustainability.

### **Contribution Towards Arts and Heritage Preservation**

The University is committed to not only enriching the world with exceptional artists but to preserving our enlightening culture and absorbing and tolerant heritage by carrying out many projects and dissertations on recording/preservation of cultural heritage that includes an approach not limited to English, Architecture, Performing Arts, Product and Industrial Design, History etc.

Actively our vertos work to attain the goal by organizing events that serve as a platform for all to come together and add a further layer of generosity, learning, humanity and oneness to the richies of the culture. Multiple Student-oriented clubs hold events of diverse nature to further provide an opportunity for the public to visit the campus and witness our culturally treasured and artistically rich areas. Additionally with open hands welcoming students from various countries and providing 'One-world' like platforms to represent their country's culture and traditional arts, in the community and beyond. These include but are not limited to DJ, traditional Art & craft, paintings, traditional visual language singing, traditional Game bar, Music, singing, old heritage games, folk dance, folk music, classic dance and classic music etc.



## **Green Campus**

To mark our vision in practice and to be an exemplar, The university has always trekked on the path of promoting greenery and environment-friendly activities on and outside the campus. From innovative Solar-Powered driver-less bus offers visitors a sustainable ride to the abundance of plants and trees on campus, It is in touch with major National Highway NH44 and National Highway NH 1 including major cities of Punjab state and has easy access to public transportation. Holidays frequently attract a large number of citizens or visitors who come to enjoy flowers, go for walks, practise, or visit.

## **LPU's Environmental Sustainability Policy**

Our Environmental Sustainability Policy considers the impact our activities have on the wider environment and aims to minimise negative impact through an Environmental Management System.

## **Sustainable travel plan**

We have a comprehensive sustainable travel plan that aims to encourage staff, students and visitors to travel to and from the university by more sustainable means.

Dedicated cycle hubs, comprising locker storage, shower and changing and cycle parking, are available on campus.

Our campus location at the National Highway connecting major cities and states supports a model shift to sustainable travel with easy access via rail, bus, cycling and walking.

To promote our “car-free” campus University students & faculty were challenged to design and invent a potential new solar bus for a suite of electric buses that will service the University staff and students.

We are not limited to the service provided to the students, staff and faculty on the premises but to the larger community in the form of ‘Emergency Services in Safety and Security’, ‘Improved Urban Systems for Liveability’, ‘Aquatic Pollution Prevention Partnership’, ‘Multiple projects in the local vicinity and under Community Development Programmes’ and many more minor and major contributions.

## **Conference organized by LPU in line with the UN sustainable development goals**

LPU has a firm commitment to developing and honing research stewardship and categorically supports the research undertakings along with optimizing the various resources required for the same. To reach that aim and ensure a research-based ambience on the campus, the varsity has organized several Conferences, Seminars, Workshops and many more platforms for discussions. Like ‘International Conference on

Sustainability: Life on Earth', 'Guest Lecture organized by LPU in line with the UN sustainable development goals: The Advent of Modern Architecture in India' and 'Online Workshop organized by LPU on Building blocks for sustainable cities and strategic master planning'.

LPU stands is a model academic institution that fully embraces the goal of creating sustainable cities and communities, completely aligning with the Sustainable Development Goals (SDGs) that are centred around this important goal. LPU has developed a set of core values and procedures to further this goal, with a distinct vision based in these SDGs. LPU's steadfast dedication to advancement is demonstrated by its annual pursuit of novel approaches and targeted initiatives to achieve these objectives. In addition to being a haven for academics, the university's expansive and lovely campus, complete with top-notch amenities and unspoiled scenery, also welcomes guests and provides access to art galleries, gardens, and libraries. With plans like 'Make Campus More Environmentally Friendly Energy Efficiency', 'Zero Carbon Footprint', 'Waste Reduction', 'Art and Culture Integration', 'Promote sustainable living practice', 'Establish clear KPIs and targets', LPU pledges to be more equipped with sustainability in every path it treks keeping vertos and the world all aligned and glued as one.

## **12. Responsible Consumption and Production**

The United Nations' 17 Sustainable Development Goals, including "Responsible Consumption and Production," aim to promote sustainable consumption and production patterns, environmental sustainability, social well-being, and economic development, while minimizing resource and wasteful use.

Global progress in poverty reduction and economic growth has led to environmental degradation due to unsustainable consumption and production practices. LPU, one of India's top ten 'Swachh' universities, is promoting responsible consumption and production through policies like ethical sourcing, waste disposal, and water recycling. The university engages students through awareness-raising, guest lectures, workshops, and technological advancements, aligning with SDG12 principles and achieving its targets.

### **ACADEMIC INITIATIVES**

The University has introduced the Rural Agriculture Work Experience (RAWE) program to promote sustainable farming practices, improve input consumption, and raise awareness about current agricultural practices.

The program educates farmers on sustainable farming techniques, efficient resource utilization, waste management, and alternative income generation. It emphasizes organic farming, crop rotation, soil conservation, water management, and integrated pest management. It also teaches about drip irrigation,



The waste management framework addresses hazardous and nonhazardous waste, ensuring safety for humans, animals, and the environment. It applies to all contracted services on a campus, including food catering, canteens, and suppliers. Implementing this framework promotes sustainability and responsible waste management practices, minimizing negative impacts on the environment and human health.

### **APPROVALS FROM GOVERNMENT AUTHORITIES**

The Punjab Pollution Control Board has obtained specific authorization under the Bio Medical Waste (Management & Handling) Rules, 2076, for discharge of effluents under the Water and Air Acts, and Hazardous and Other Wastes Rules, 2076.

### **COLLABORATIONS WITH AGENCIES FOR DISPOSAL OF WASTE**

The Bio Medical Waste Treatment Plant Pvt. Ltd., Pathankot, is authorized by government authorities for lifting, recycling, and disposing of biomedical waste, solid waste, e-waste, and hazardous waste. The campus has arrangements for municipal solid waste lifting and dumping, and an agreement with Exigo Recycling Private Limited for electronic waste recycling. Biomedical waste is segregated before lift-up.

### **INTERNAL SYSTEM AT THE CAMPUS**

The university has implemented a comprehensive waste management system, including neutralizing chemicals, installing a sewage treatment plant, treating liquid biomedical waste with sodium hypochlorite, and collecting biomedical waste in color-coded dustbins. The campus has over 440 sweepers, efficient cleaning, pest control, and agreements for electronic waste disposal.

### **WASTE MINIMIZATION, REUSE AND RECYCLING**

Waste management involves continuous waste avoidance and minimization at source. Regular training and workshops promote awareness. Vermicomposting produces compost from waste leaf litter and earthworms, supplemented with kitchen waste. Left-over food is transported to nearby piggeries and cow sheds. A biogas plant, based on the "Deenbandhu model," produces biogas from cattle dung, enough for 75 people daily.

### **CAMPUS/EXTENSION ENGAGEMENT ACTIVITIES**

#### **Innovative Techniques of Organic Farming and Permaculture**

The School of Agriculture and Division of Student Welfare, in collaboration with NITTTR Chandigarh, conducted a 30-hour online faculty training program on "Innovative Techniques of Organic Farming and Permaculture" from March 28th to April 1st, 2022. Speakers from renowned organizations shared their expertise.

Faculty members are trained in organic farming and permaculture, promoting active thinking, market opportunity identification, and business idea generation were the key outcomes of the event.

### **Guest Lecture - High density planting in fruit crops in India**

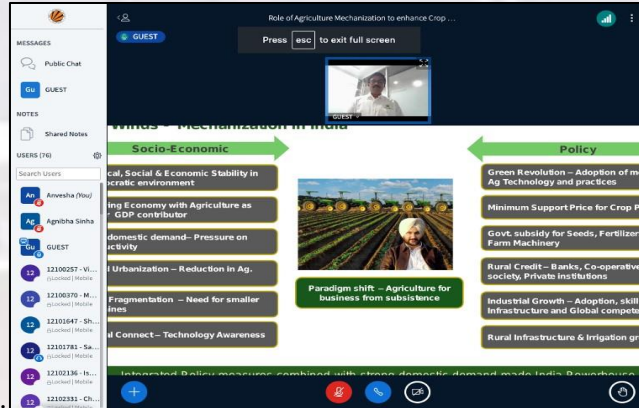
Dr. Javeed Kounser, a SKUST-K scientist, delivered a guest lecture on high density planting in fruit crops in India. He highlighted its importance in fruit science, highlighting its potential for higher yields and returns. Kounser highlighted the need for regular pruning, bioregulators, and effective irrigation practices to manage pests and diseases.



**Guest lecture on High density planting in fruit crops in India**

### **Role of Agriculture Mechanization to enhance Crop Production and Farmers**

Mr. Suraj Kumar Jirwankar, a product manager at John Deere Pvt. Ltd, gave a guest lecture on mechanization in Indian agriculture. He highlighted the potential of mechanization to bridge the gap between population growth and food demand. Despite the challenges faced by marginal farmers, Jirwankar emphasized the importance of custom hiring and precision farming techniques. The lecture also showcased new AI technologies and allowed students to interact with the lecturer



### **Guest lecture by Mr. Suraj Kumar on Agriculture Mechanization to enhance crop production**

#### **Webinar on Millets – Use and Benefit**

On 26/11/2021, the School of Hotel Management and Tourism hosted a guest lecture on millets, led by Dr. Khadar Vali, the Millet Man of India. Vali discussed the benefits of millets as an alternative grain, challenges in establishing millet as a staple grain, and appropriate cooking techniques for millets.

#### **Current approaches in the management of insect pests of vegetatively propagated spices**

The guest lecture on 11/11/2022 discussed recent pest management techniques for vegetatively propagated spice crops. Spices are crucial in Indian cuisines, adding flavor and increasing food palatability. The lecture aimed to enhance students' knowledge and skills in pest management, preparing them for competitive exams and enhancing their knowledge in eco-friendly methods.



## Guest lecture on management of insect pests of vegetatively propagated spices

### Conservation Agriculture and weed management in cropping systems

Dr. T. K. Das, a professor and principal scientist at ICAR-Indian Agricultural Research Institute, conducted a guest lecture on weed management in field crops. He introduced students to conservation agriculture, a crucial concept due to concerns about crop residue burning in North India. The lecture aimed to enhance students' knowledge and prepare them for competitive exams.

### Developments in CNG and LPG Technologies towards Sustainable Energy

A guest lecture on CNG and LPG technologies for sustainable energy was organized by the School of Chemical Engineering and Physical Sciences. Assistant Professor Sayan Chatterjee discussed latest methodologies, processing techniques, and problem-solving in natural gas processing. The event aimed to apply concepts in marketing, retailing, and trading.

The screenshot shows a Zoom meeting interface. The main window displays a presentation titled "Oil & Gas Plants". The presentation content includes:

- A flowchart of a "Simple Refinery Process" showing the flow from Crude Oil through various stages: Desalter, Distillation Tower, and Fractionation Column. Key components include pumps, heat exchangers, and separators. The process involves heating crude oil to 350°C and separating it into different products like Gasoline, Diesel, and Fuel Oil.
- A table of Hydrocarbon Gases:

Name	Chem. Formula	n	Boiling Point	Freezing Point
Butane	$C_4H_{10}$	C4	-1 to 1°C	-140°C
Propane	$C_3H_8$	C3	-42°C	-185°C
Ethane	$C_2H_6$	C2	-88°C	-185°C
Methane	$CH_4$	C1	-164°C	

The Zoom interface shows the presenter, Sayan Chatterjee, and several participants: Abhijeet Bhondve, Edward Samson, George Simon, Ummadisetty Likhith, Gowtham k, and Dr. Dharmendra To... The meeting title is "Guest Lecture for Chemical engineering" and the time is 9:15 AM.

Guest Lecture on “Developments in CNG and LPG Technologies towards Sustainable Energy” by Sayan Chatterjee

### **Guest Lecture on Guide to set up a bakery business with possible challenges**

Mr. Kamal Nagpal, MD of SN Foods, presented a guest lecture on 11/11/2022, guiding students on setting up a bakery business, discussing challenges and solutions, and providing information on upcoming trends in the industry. The event aimed to educate students on bakery business planning.

### **Value Added Course on Global Bakery and Confectionery**

The School of Hotel Management and Tourism organized a Value Added Course on Global Bakery and Confectionery on 17/11/2022, involving faculty members and research scholars. Participants gained knowledge on bakery, high-tea snacks, and confectionery, as well as preparation techniques and the role of commodities in these products.



**Students participating in guest lecture on Global Bakery and Confectionery**

### **Chef Conclave 2021 - Food Tale – An Odyssey Through Time**

The Chef Conclave 2021, hosted by the Department of Food Production of SOHMT, LPU, aimed to bring together industry professionals and academicians to discuss food's past, present, and future. The



event focused on understanding factors affecting food patterns, choosing the right path for the future, and gaining knowledge to reflect in their work with the industry.

### **Session on Sustainability and Wool**

Experts introduced global sustainability frameworks and strategies for sustainable textile businesses, focusing on wool fiber and wool. The seminar, inaugurated by Dean Bhaskar Mitra, emphasized circular design, regenerative agriculture, and reduced environmental impacts. Key outcomes included analyzing sustainability concepts in product development, applying innovative wool-based solutions, and evaluating sustainable product processes.



**Presentation of resource person - Session on sustainability and wool**

## **13. Climate Action**

### **Introduction**

A significant effort to enrich the capacity in the clean and inexpensive energy fields is one of the basic requirements to utilize the current fossil-fuel-based energy system to the renewable energy-based system. In India, the estimated potential for solar and wind energy is to be at 7,48,990 MW and 6,95,509 MW, respectively. Over the 20th century, energy was dominated and supported by fossil fuels, and the 21st century is the locus of transition to renewable energy. To overcome the potential pitfalls of increasing

energy supplies and lowering carbon dioxide emissions, a better understanding of energy issues and novel technologies is required. As per the Indian government's vision, Lovely Professional University (LPU) is likewise moving on the same path. In the areas of renewable energy, energy conservation, energy-efficient buildings, and management of sustainability, LPU has devoted a strong commitment and contribution to clean energy deployment, research, academic programs, consultation, and professional training. According to the Bureau of Energy Efficiency, Govt. of India, LPU has a 7.5 MW solar power plant with 33.42kWh/m<sup>2</sup>/year of energy performance index and consumption of a building with a 5-star rating.

### **Academic Initiatives:**

With the growing economy of India, energy consumption is increasing by 7 to 10% annually. The relationship between carbon-based fossil fuels and global warming is crystal clear. Therefore, developing new and effective means of sustainable energy is very important. To meet such requirements skilled and efficient human capital needs to be developed. Lovely Professional University is highly committed to conserving human resources and pursuing sustainability through research, teaching, operating practices, and capacity building. Therefore, the University has embedded 115 Courses for undergraduate, postgraduate, and research studies programs. The University also offers a specific master's program in "M Tech on Renewable Energy" to provide trained manpower in the field of renewable and clean energy. More than 8,000 students are the beneficiaries of these courses/programs. The prime objective for designing these courses is to build up the understanding of clean and affordable energy and to help the nation and world meet the future requirements of United Nations development goals. Some major courses in the University are Solar energy technology, renewable energy, and green technology, renewable energy, wind and solar energy systems, workshop and design of solar systems, energy conservation for Electrical Engineering, non-conventional energy resources, non-conventional energy sources, and energy auditing, Energy Conservation, New and Emerging Technologies, Energy-efficient Building Design Strategies, Sustainable Development and the Livelihood, and Clean Fuel, etc. The university also offers various capstone projects related to climate change. Lovely Professional University is committed to increase the use of clean energy sources and is already undertaking various small-scale sustainable power projects.

### **Research Initiatives:**

In addition to the academic initiatives, the faculty members is contributing towards research publications and patents as per given below

Title	Source title
An Intelligent Weather Station Design for Machine Learning in Precisions Irrigation Scheduling	Lecture Notes in Electrical Engineering
Legume-based inter-cropping to achieve the crop, soil, and environmental health security	Advances in Legumes for Sustainable Intensification
Second-generation biofuels: Facts and future	Relationship between Microbes and the Environment for Sustainable Ecosystem Services: Microbial Tools for Sustainable Ecosystem Services: Volume 3
Innovation in Green Building Sector for Sustainable Future	Energies
Edible cutlery: An eco-friendly replacement for plastic cutlery	Journal of Applied and Natural Science
Artificial Intelligence Technologies for Forecasting Air Pollution and Human Health: A Narrative Review	Sustainability (Switzerland)

**Patent:**

Publication/Granted Number	Title
AU2021102848	Iot Enabled Solar Powered Aeration System
AU2021105014	An Emission Pass Module Based Nfc Card For Pollution Control In A Vehicle
AU2021105850	Smart Solar Energy Based Mobile Cover
IN202111028771	A Novel Window Frame System For Lighting In A Building
IN202211007500	A Novel Method Of Charging Electric Vehicles

## Local Education Programmes

Lovely Professional University is committed to address the urgent challenges of climate change and is actively involved in conduction of local educational programs on climate action. These programs are designed to empower individuals with the knowledge and necessary tools to contribute to sustainable and climate-resilient future.

### List of Courses conducted on Climate Change risks, impacts, mitigation, adaption, impact reduction and early warming

Sr. No	Title of Course
1	Short-Term Course on Emerging technologies to make cities smart and sustainable
2	Short-Term Course on Geospatial Perspective on Disaster Management
3	Short-term course on Clean Water Hydraulic Modeler: EPANET
4	Online Course on Climate Change and Health
5	Short term course of Energy Management 4.0 organized by LPU in association with ENEA

### List of Conferences conducted on Climate Change risks, impacts, mitigation, adaption, impact reduction and early warming

Sr. No	Title of Conferences
1	International Conference on Sustainable Development Goals (29-30 September 2023)
2	4TH International Conference on Sustainable Developmental Goals and Management Practices (3-4 Feb 2023)
3	International Conference on Sustainability Life on Earth (17-18 December 2021)
4	5TH Neo- International Conference on Habitable Environments & Professional Meet (12-13 October 2023)
5	Innovative Strategies for Sustainable Water Management (17-18 November)

<p><b>ORGANIZING COMMITTEE</b></p> <p><b>CHIEF-PATRON</b> Smt. Ashok Mittal Chancellor, Lovely Professional University</p> <p><b>CHAIRMAN</b> Prof. Ramesh Kanwar Vice-Chancellor, Lovely Professional University</p> <p><b>CONVENER</b> Dr. Neeta Raj Sharma Professor &amp; Additional Dean, School of Bioengineering and Biosciences, Lovely Professional University</p> <p><b>TREASURER</b> Dr. Ashiq Hussain Mir Asst. Professor, Department of Zoology, School of Bioengineering and Biosciences, Lovely Professional University</p>	 <p>LOVELY PROFESSIONAL UNIVERSITY Transforming Education Transforming India</p>	 <p>INSTITUTE OF FOREST PRODUCTIVITY</p>
<p>Dr. Bhanu Bahadur, Director, Institute of Forest Productivity, Ranchi, Jharkhand, India.</p> <p>Prof. Giuseppe S. Biondi, International Biotechnology Centre</p> <p>Prof. Massimo P. Marchi, Department of Wood and Forest Sciences, Lund University, Sweden</p> <p>Prof. Subhanjan Bose, Director, Department of Biotechnology, Manipal Institute of Biotechnology, Manipal</p> <p>Prof. Anand Kumar, School of Biological and Marine Sciences, University of Plymouth, UK</p> <p>Dr. Sharad Tiwari, Scientist F &amp; Head IT/GIS Cell, Institute of Forest Productivity, Ranchi, Jharkhand, India.</p> <p>Dr. Animesh Sinha, Scientist F, Forest Genetics Division, Institute of Forest Productivity, Ranchi, Jharkhand, India</p> <p>Dr. D.S. Suman, Principal Scientist, Zoological Survey of India.</p> <p>Mr. N.K. Sahgal, Director, PECHA AV Systems Pvt. Ltd, India.</p> <p>Mr. Jitender Sodhi, Chairman &amp; Managing Director, Aakash Group of Companies, India.</p>	<p><b>International Conference on Sustainability Life on Earth 2021 (ICS-LOE 2021)</b> (Online Conference)</p> <p>Organised by: <b>School of Bioengineering and Biosciences, Lovely Professional University, Phagwara, Punjab &amp; Institute of Forest Productivity, Ranchi, Jharkhand</b></p>	 <p><b>17-18 December 2021</b></p>  <p>www.lpu.in</p>
<p><b>STEERING COMMITTEE</b></p> <ul style="list-style-type: none"> <li>Dr. Ashish Vyas</li> <li>Er. Himanshu Singh</li> <li>Dr. Umesh Goutam</li> <li>Dr. Anand Mohan</li> <li>Dr. Rahul Singh</li> </ul>	<p><b>CONTACT US AT</b></p> <p><b>ORGANIZING SECRETARY</b> Dr. Joydeep Dutta Email: joydeep.dutta@lpu.co.in Phone: +916239114918</p> <p><b>TREASURER</b> Dr. Ashiq Hussain Mir Email: ashq.23670@lpu.co.in Mobile: +917006294253</p>	
<p>Lovely Professional University (LPU), Jalandhar-Delhi G.T. Road, Phagwara, Punjab, India</p>		

## International Conference on Sustainability Life on Earth held on 17-18 December 2021

### Strategic plan for sustainability

The Sustainable Development Goals (SDGs), adopted by all United Nations Member States in 2015, represent a visionary blueprint for a more inclusive, equitable, and environmentally conscious future. Comprising 17 interlinked objectives, the SDGs encompass a wide array of economic, social, and environmental targets aimed at eradicating poverty, safeguarding the planet, and promoting prosperity for all. These goals not only serve as a rallying cry for nations, communities, and individuals worldwide, but they also reflect a shared commitment to forging a path toward a more sustainable and harmonious world. This introduction sets the stage for a deeper exploration of each of the 17 SDGs, illuminating their significance, interconnectedness, and the transformative potential they hold for our planet and its inhabitants by the end of 2023.

The Strategic Plan of Sustainability in LPU aims to create a roadmap for becoming a sustainable institution that contributes positively to the environment, society, and the economy while providing an exemplary education to its students. The following five pillars outline the goals and outcomes of the university's first Sustainability Plan. These goals were generated collaboratively by stakeholders across campus and were garnered to get support from the offices responsible for leading the implementation.

## **Energy Conservation Measures:**

### **Solar Power:**

University's Commitment to guidelines contributing the sustainability goals of United Nations:

It is pertinent to mention that the University has installed a rooftop solar PV plant of 1.1 MW in the year 2018. These efforts align the university's commitment with the sustainable development goals set by the United Nations. The installation of rooftop solar PV plants and the potential of 7.5 MW solar power plant further highlight the university's dedication to utilize the renewable energy sources and reducing its carbon footprint.



**Solar Power Plant**

**Solar Irrigation System:** Three units of solar-based irrigation systems are installed by the University. Each unit has a capacity of 5 horsepower. The drip irrigation system is assembled with these motors to irrigate orchards. This system is highly efficient to minimize the loss of water and efficient use of energy and water resources.



**Solar Water Pumping system**

### **Centralized Chiller Plant:**

In the administrative blocks, the University replaced split and windows AC's with 265 TR centralized chiller water-based cooling system. The new system consumes 40% less electrical energy as compared to conventional AC's. The university also has a strategy to reduce the consumption of energy by scheduling the running time of the Air conditioning machines in the daytime as well as during peak summer months.



**Centralized Chiller Plant**

**Energy-Efficient Lightings and Utilization of Daylight:** In the year 2019, 5644 conventional lighting systems of 53W and 108W were replaced by using 20W and 36W energy-efficient systems, respectively. As mandatorily, hostel blocks are installed with 25W LED lamps in hostel rooms and hostel toilets & corridors are installed with 9W LED lamps and that will follow in the future also. In the year 2020, 100% of lights were replaced with LED in academic buildings and 48% in residential buildings. Street and security lights are switched on and off as per the session of the year to make use of the daylight. For the conservation of energy, 50% of streetlights have been switched off at 11:00 PM and another 25% have been switched off at 12:00 AM.



**Polyhouses in a University**

### **Energy-Efficient Building:**

In an era of smart cities, sustainable buildings and contemporary interiors, the University designed an energy-efficient building with specialized architects. They have also trained our students to become lateral thinkers by focusing on the critical design approach. With an exposure to international environment, accessibility to the latest tools, software's and technology, our students also become architects that create buildings and infrastructure that are globally acknowledged. Due to the incorporation of energy-efficient building strategies, the energy consumption density of the LPU buildings are much lower than 5 star rated buildings by Bureau of Energy Efficiency, Government of India

### **Green transportation:**

Solar power bus and battery-operated e-rickshaws operate in the campus since 2017. 36 e-rickshaws and 10 e-golf kart service connecting its major buildings, departments, hostels for students and faculty members. Nearly 100 Km mileage is given by each e-rickshaw. In this way, the university strives to combat the detrimental carbon-emitting conventional means. 10 e-polo karts are also launched with improved sitting capacity vehicles and helping towards the improvement of air quality at the micro-level.



**Solar Bus**



**Bicycles used in Campus**



### **Creepers vertical greening strategies:**

The objectives for the green campus have been framed aligned with the national and international guidelines. Creepers, vertical green strategies have been adopted to save energy and to reduce the urban heat island effects.



**Creepers vertical greening strategies**

### **Tie-ups with the local government or community groups**

Lovely Professional University climate action plan is a comprehensive strategy that outlines the institution's efforts to reduce its environmental impact and mitigate climate change. These plans typically encompass a wide range of actions related to energy efficiency, carbon emissions reduction, sustainable practices, and environmental education. University also engages with stakeholders, including students, faculty, staff, and local communities, to ensure that the plan reflects the values and goals of the institution. Moreover, regular reviews and updates of the plan are shared with the Local and regional government/community groups.


Following are the elements that are shared with the local Government.

Lovely Professional University regularly conducts (yearly basis) Environment and Energy audit with the main objective to assess and evaluate environmental and energy performance, identify areas for improvement, and develop strategies to achieve greater sustainability and efficiency. Environmental and energy audits play a crucial role in helping University to identify and address sustainability and efficiency challenges, ultimately contributing to a more environmentally responsible and financially sound operation.

## MoU with Punjab Energy Development Agency (PEDA)


The university is associated with the government of Punjab, India to support the execution of policies/guidelines on clean and energy-efficient technology. An MoU was signed with Punjab Energy Development Agency (PEDA) on 19<sup>th</sup> December 2019 to undertake research/design/ demonstration/ pilot projects, user trials/ field trials, patenting, propagating knowledge and facilitating skill up-gradation and information dissemination in the field of energy efficiency & energy conservation.

## **LPU signs MoU with Punjab Energy Development Agency (PEDA), Government of India with theme of Energy Conservation & Energy Efficiency**



### ENERGY CONSERVATION

SDA-PUNJAB  
State Designated Agency of Bureau of Energy Efficiency  
Ministry of Power, Govt. of India



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- PROGRAMMES
- NOTIFICATION
- TENDERS
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## Research and Demonstration

Home → Research and Demonstration

### MoU signed with Reputed Technical Institutions & Universities for undertaking Research & Demonstration activities on the theme of Energy Conservation & Energy Efficiency

To strengthen partnership between policy makers and educational institutions to forward the energy efficiency drive and to enhance the outreach activities.

List of 12 institutions with whom MoUs have been signed:

S. No.	College / University	Date of Signing of MOU
1.	DAV University, Jalandhar	4th December 2019
1.	Chandigarh Polytechnic College, Gharuan	16th December 2019
1.	National Institute of Technical Teachers Training & Research (NITTTR), Chandigarh	17th December 2019
1.	CGC Jhanjeri, Mohali	17th December 2019
1.	National Institute of Technology, Jalandhar	17th December 2019
1.	Chitkara University, Rajpura	17th December 2019
1.	Punjab Engineering College, Chandigarh	19th December 2019
1.	Lovely Professional University, Phagwara	19th December 2019
1.	Chandigarh University, Gharuan	19th December 2019
1.	Chandigarh Group of Colleges, Landran	19th December 2019
1.	Guru Nanak Dev Engineering College, Ludhiana	20th December 2019
1.	Thapar Institute of Engineering & Technology, Patiala	20th December 2019

## **LPU signs MoU with CSIR-AMPRI, Students to convert 'Waste into Wealth.**

Council of Scientific and Industrial Research (CSIR)– Advanced Materials and Processes Research Institute (AMPRI), Bhopal, and Lovely Professional University signed an MoU for bringing ample entrepreneurial opportunities to LPU students. Using AMPRI technologies, students will be educated how to make wealth from the waste. The MoU is to undertake joint 'Research and Academics' pursuits in various areas related to nation-building. It is a boon to students as it will even ensure generation of exportable products from alternative materials.

The Race to Zero is a global campaign to rally leadership and support from businesses, cities, regions, investors for a healthy, resilient, zero carbon recovery that prevents future threats, creates decent jobs, and unlocks inclusive, sustainable growth.

It mobilizes a coalition of leading net-zero initiatives, representing **11,309 non-State actors including 8,307 companies, 595 financial institutions, 1,136 cities, 52 states and regions, 1,125 educational institutions and 65 healthcare institutions (as of September 2022)**. These 'real economy' actors join the largest-ever alliance committed to achieving net zero carbon emissions by 2050 at the latest.

The objective is to build momentum around the shift to a decarbonized economy, where governments must strengthen their contributions to the Paris Agreement.

**Lovely Professional University is now a signatory to the "Race to Zero" for Universities and Colleges meeting the starting line criteria. These 'meta-criteria' are known as the Five 'P's:**

### **Energy Performance Index:**

Energy Performance Index (EPI) in kWh per square meter/year is considered for the rating of the buildings for star label by the Bureau of Energy Efficiency Govt. of India. The energy performance index of Lovely Professional University was + 33.42 kWh/m<sup>2</sup>/year. For the composite climate of India if a building is having more than 50% of building area than the building is considered 5 star rated building if EPI is below 90 kWh/m<sup>2</sup>/year. In case of LPU, the EPI is much lower than Indian standard of 5 stars rating which itself shows efficient management and operation of the building.

**Star rating for office buildings as per Bureau of Energy Efficiency, Government of India for major climates of India.**

<b>Air-conditioned area &gt; 50% of building area</b>	<b>Lovely Professional University</b>	<b>Star Label</b>
<b>EPI (kWh/m<sup>2</sup>/year)</b>	<b>EPI (kWh/m<sup>2</sup>/year)</b>	
190-165	-	*
165-140	-	**
140-115	-	***
115-90	-	****
<b>Below 90</b>	<b>33.43</b>	<b>*****</b>

**Outreach Activities:**

Lovely Professional University (LPU) is actively participating in cooperative planning for climate change disasters, which can involve the displacement of people both within a country and across borders. Lovely Professional University is aware of its responsibility towards sustainable development and one of the activities is to create awareness among students, staff, and community by organizing various workshop, seminars, conferences, and outreach programs. LPU can play a significant role in fostering resilience, reducing displacement, and promoting sustainable solutions in the face of climate change-related challenges.



**Celebrated World Environment Day 2022 planting trees on a large scale in Jalandhar, Punjab 06-June-2022**



**LPU NSS Volunteers Successfully Executed 'Joy of Giving' Project held on 26<sup>th</sup> June, 2023**



**A plantation drive was organised at LPU Campus in association with Bank of Baroda 22-July-2021**



**National Science Day-2022 on Integrated Approach in Science and Technology held on 28<sup>th</sup> Feb.2022**

**14. Life below Water**

**Introduction:**

The water of the seas and Oceans are vital for our planet's life support and regulate the global climate system as we mostly rely for food, energy and water on these healthier resources. SDG 14 emphasizes responsible use of oceans and marine resources of the planet to protect the valuable aquatic resources and ecosystem. The implementation of SDG 14, "Life Below Water," faces several major challenges and requires attention in various areas such as Overfishing, Marine Pollution, Ocean Acidification, Climate Change etc. Every significant organization bears the responsibility of mitigating this degradation, and as a prominent educational institution, LPU takes comprehensive measures to alleviate this burden. These efforts encompass a wide range of initiatives, including research and innovation projects, adoption of advanced technologies to minimize and control wastewater generation, conducting awareness campaigns among students, and educating the public.

### **Academic Initiatives:**

Our academic offerings are thoughtfully designed to align with the SDG 14. We believe in transforming education through a rigorous academic approach, a strong emphasis on practical learning, and a teaching methodology that focuses on tangible outcomes. Our benchmarked curriculum is strategically crafted to be industry-oriented, preparing our students for sustainable management of fisheries.

### **Research Initiatives:**

#### **Research Publications:**

Lovely Professional University has initiated a comprehensive and progressive research agenda aimed at addressing critical environmental challenges related to wastewater treatment, microplastics, municipal wastewater and sludge treatment, species invasion, and the growing concern of micro- and nano-plastic pollution in industrial wastewater. The following are research publications initiatives to minimize or prevent damage to aquatic ecosystems.

<b>Sr. No</b>	<b>Author Detail</b>
1	Chaurasia, Preeti, and Sanjeev Kumar. "Treatment, Recycling, and Reuse of Wastewater from Tannery Industry: Recent Trends, Challenges, and Opportunities." <i>Omics Insights in Environmental Bioremediation</i> (2022): 317-337.
2	Vyas, Pratibha, Sandeep Sharma, and Jeena Gupta. "Vermicomposting with microbial amendment: implications for bioremediation of industrial and agricultural waste." <i>BioTechnologia</i> 103.2 (2022): 203.
3	Das, Sujata, Shalini Singh, and Shashank Garg. "Agri-residual waste, wheat bran as a biosorbent for mitigation of dye pollution in industrial wastewaters." <i>Journal of Basic Microbiology</i> 62.3-4 (2022): 465-479.
4	Singh, Simranjeet, et al. "Competence of nanoparticles for removal of pesticides from wastewater: an overview." <i>Pesticides Remediation Technologies from Water and Wastewater</i> (2022): 253-266.
5	Koul, Bhupendra, Komal Sharma, and Maulin P. Shah. "Phycoremediation: A sustainable

Sr. No	Author Detail
	alternative in wastewater treatment (WWT) regime." <i>Environmental Technology &amp; Innovation</i> 25 (2022): 102040.
6	Singh, Simranjeet, et al. "Integrated technologies for wastewater treatment." <i>Integrated Environmental Technologies for Wastewater Treatment and Sustainable Development</i> . Elsevier, 2022. 433-457.
7	Chawla, Priyanka, et al. "Water quality prediction of salton sea using machine learning and big data techniques." <i>International Journal of Environmental Analytical Chemistry</i> (2021): 1-24.
8	Jhariya, Manoj Kumar, et al. "Species invasion and ecological risk." <i>Natural resources conservation and advances for sustainability</i> . Elsevier, 2022. 503-531.

### Patents:

Researchers at Lovely Professional University (LPU) have demonstrated a strong commitment to address critical challenges related to Sustainable Development Goal 14 (SDG 14) by focusing on innovative solutions for aquatic ecosystems and marine pollution issues. Their work includes developing improved methods for wastewater treatment, enabling the efficient utilization of wastewater and recycling of waste plastics. Following is the list of patents:

Title of the Patent	Number
An integrated real-time monitoring system for removal of foul smell from wastewater	AP/P/2022/06973
Drain Sewage Treatment System	AU2021103127
A Novel Paver for Rainwater Harvesting and Method Thereof	IN202211018772
A method of recycling of waste plastic into best material for remediation of wastewater	IN202211065339



Improved utilizations of wastewater	IN202211070759
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**Funding Project:**

Toxic discharge from industrial processes is a significant contributor to marine biodiversity and aquatic ecosystem pollution. Lovely Professional University (LPU) has recognized this issue and has actively contributed to mitigating its impact. LPU's efforts are notably directed towards reducing contaminants in textile industry effluent and developing effective treatment methods. By addressing the pollution issues associated with the textile industry, LPU plays a crucial role in safeguarding marine biodiversity and aquatic ecosystems.

Name of the Funding agency	Title of the Project
ISRO	Assessment of fluoride contamination in groundwater in Punjab using GIS and machine learning techniques.
Nikom chemicals	Identification of contaminants in textile industry effluent and their treatment methods

**Published books related to Sustainable Development Goal 14:**

The faculty at Lovely Professional University (LPU) has made significant contributions to the editorial ship of books related to Sustainable Development Goal 14 (SDG 14) and various aspects of microbial technology and bioengineering. These publications reflect LPU's commitment to advancing knowledge and addressing critical environmental challenges. The books encompass a diverse range of topics, from the intricate polyandrous mating system of Queen Honeybees, shedding light on their unique reproductive biology, to exploring the vital relationship between microbes and the environment, which is crucial for the provision of sustainable ecosystem services. Additionally, LPU's faculty delves into the profound impact of changing climates on the human microbiome, providing insights into the intricate interactions between microbes and their hosts.

<b>Title of the book</b>	<b>Author Detail</b>	<b>Book ISBN Number</b>
New and Future development in Microbial technology and Bioengineering	Edited by: Dr. Joginder Singh and Praveen Gehlot	eBook ISBN: 9780444635150
Polyandrous Queen Honeybee	Dr. Loveleen Marwaha	ISBN: 978-981-5079-12-8 (Online), DOI: <a href="https://doi.org/10.2174/97898150791281120101">10.2174/97898150791281120101</a>
Relationship between Microbes and Environment for sustainable Ecosystem Services	Dr. Joginder Singh, Dr. Jastin Samuel, joint editorship with international scientist Dr. Ajay Kumar (Israel).	ISBN 978-0-323-89938-3, DOI <a href="https://doi.org/10.1016/C2020-0-02873-2">https://doi.org/10.1016/C2020-0-02873-2</a>
Microbiome Under Changing Climate	Dr. Ajay Kumar (Israel), Dr. Joginder Singh, Luiz Fernanado Romanholo Ferreira	eBook ISBN: 9780323906975
Solid Waste Management	Dr. Manvendra Singh	ISBN: 9789355155283

**University Collaboration in efforts to maintain shared aquatic ecosystems:**

The university places a high priority on fostering global cooperation and engagement, which is reflected in our extensive network of collaborative initiatives and partnerships. Our commitment to expanding the horizons of knowledge and promoting international collaboration by Collaborative Research Projects, Faculty and Student Exchange programs, academic activities such as seminars, workshops, and conferences serves as a platform for the exchange of ideas and the dissemination of knowledge. These resources enable us to advance our initiatives and contribute to global knowledge.

**Collaboration with the organisations at Global and National level are listed below:**

<b>Sr. No.</b>	<b>Name</b>	<b>Duration (Years)</b>	<b>Local / National/ Global</b>
1	Curtin University, Perth, Western Australia	5	Global
2	Toshvin Analytical Private Ltd, Mumbai	3	National
3	ICAR ICAR-National research Centre on Equines, Haryana	5	National
4	Perkinelmer India pvt. ltd, Thane	5	National
5	Bruker India Scientific Private Limited, Mumbai	5	National

**University support programs and provide incentives that encourage and maintain good aquatic stewardship practices**

The university encourages its researchers to play an active role in the preservation of aquatic ecosystems and biodiversity. Researchers make valuable contributions through their research publications, patent filings, consultancy solutions, and the dissemination of knowledge and awareness via book publications, among other initiatives aligned with the objectives of Sustainable Development Goal 14. University also offers support and incentives to acknowledge and reward researchers for their efforts in achieving various targets within the United Nations' Sustainable Development Goals.

**Contribution in Government Schemes for Development of under water resources:**

Faculty members from university are providing their scientific input in reducing the deterioration of water and sustenance of life under water at local level as well. In the same line some of the distinctive faculties of university are involved as members for implementing development of fishery resources in Kapurthala district in Punjab **under Pradhan Mantri Matsya Sampda**

**Yojna (PMMSY)** for the years 2020-21 to 2024-25. Pradhan Mantri Matsya Sampada Yojana is a scheme to bring about Blue Revolution through sustainable and responsible development of fisheries sector in India and has been approved at a total estimated investment of Rs. 20,050 crores for implementation from FY 2020-21 to FY 2024-25.

Description	Link to Document
LPU faculty involvement in Pradhan Mantri Matsya Sampda Yojna (PMMSY)	<a href="#">Click here</a>

**Students of LPU visited the Guru Angad Veterinary and Animal Sciences University (GADVASU), Ludhiana.** Students experienced practical exposure from the study visit, which proves to be very adventurous and inventive. As the university has a vast collection of both preserved and living specimens, the visit's goal was to get more knowledge about zoological principles in the field of fisheries.



**Students visiting Fish culture facilities**



Students visiting Fish culture facilities in Fisheries Centre GADVASU, Ludhiana

### **Outreach Activities for local or national communities on sustainable management of Aquatic Ecosystem:**

LPU students and researchers aim to preserve and expand existing aquatic ecosystems and biodiversity. In addition to this, the university encourages the activities required to escalate and monitor the health of aquatic ecosystems.

#### **Restoration of Wetland development to prevent Aquatic Ecosystem**

Wetlands are home to both aquatic and terrestrial organisms, thus ensuring their survival is crucial. Harike wetland is extremely important not only for its ecological benefits but also due to its rich biodiversity. But the wetland is heading towards extinction due to degradation of the environment at an alarming rate.

So, to save this wetland from extinction, measures should be taken to prevent pollution and ensure proper restoration. LPU university also supporting the establishment of more community-based programs like project **SAHYOG** be initiated to revive natural water resources and wetlands

Considering the seriousness of the above critical matter, LPU researchers contributed by forming biological/non-biological matrix for growing especially suited plants (Hydrophytes) and renewing the characteristics of wetland (hydric) soils, LPU researchers and PhD scholars are trying to regenerate wetlands at Harike Lake.

Link to the Harike Wetland Research Project: [Click here](#)

### **Regeneration of Wetland under research project**



Wetland development is an important research field to maintain life sustainability in water and surroundings. With large level of urbanization, human disturbances have resulted in reduction and vanishing of wetlands. Since wetlands support both aquatic and terrestrial organisms, their sustenance is of major importance. LPU researchers and PhD Scholars are working on renewal of wetlands by utilizing specially developed biological/non-biological matrix for growing specially adapted plants (hydrophytes) and renewing the characteristic of wetland (hydric)soils.

### **Research work on Meiofauna presence in marine sediments**

**About the Research:** LPU Research scholar is working on Thrust area “Spatial and Seasonal variation of Polychaete along the Macrophytic and Non-Macrophytic area of Chilika Lagoon, India”.

In this research, samples were collected from the **Gulf of Kachchh** during three different seasons. Through analyzing meiofaunal communities in these diverse conditions, the study aims to assess sediment quality and identify potential impacts of pollution and climate change. These sediment samples have been carefully processed in the laboratory to extract and identify the polychaetes present. The collected data would then be analyzed to determine the spatial and seasonal patterns of polychaete distribution.

The results may contribute to our understanding of the overall biodiversity and ecosystem dynamics of the Chilika Lagoon, as well as provide valuable information for its conservation and management



### **Disappearing Wetland: A Study of Basai Wetlands, Haryana (India)**

Basai wetlands, located in Gurgaon city in Gurugram district of Haryana, India has been experiencing rapid shrinkage in its area over recent years due to continuous encroachment resulting from ever expanding city. The research, based on secondary data, examines the importance, threats and challenges faced by the wetland along with presenting a comparison between Basai and Sultanpur wetlands, which are located close to each other but in terms of conservation efforts display wide disparities. The paper highlights the extent of damage suffered by Basai wetlands on account of government and public apathy.



## **Educational outreach activities to maintain and extend existing ecosystems and their biodiversity**

### **Protect and Restore Ecosystem:**

#### **Sewage Treatment Plant & further irrigation at LPU**



LPU boasts a state-of-the-art sewage treatment system that adheres to stringent government regulations. This advanced system includes a Sewage Treatment Plant (STP) with an impressive capacity of 5 MLD (50 lakh liters), which efficiently processes wastewater from dormitories, offices, and other facilities. The treated water is then repurposed for horticulture and agricultural use, while the resulting sludge is utilized as organic fertilizer for gardens. Additionally, a smaller STP with a 10 KLD (10,000 liters) capacity is available at the Main University Playgrounds for handling wastewater from sports fields. The water quality is rigorously monitored by government-approved labs in accordance with the Water (Prevention and Control of Pollution) Act of 1974. Authorized by the Punjab Pollution Control Board, the treated water is deemed safe for irrigation and crop cultivation, ensuring it does not harm existing aquatic ecosystem and its biodiversity or contribute to pollution and eutrophication issues.

#### **Rainwater Harvesting system at LPU**

The primary source of water is groundwater so no aquatic life is disturbed as water is not being harnessed from surface water bodies. Further ground water is also being used responsibly and being recharged through rainwater harvesting. Rainwater harvesting is a unique technique to recharge ground water naturally. LPU carries out rainwater harvesting in most of its buildings through the most recent available technology and carries out this responsibility in the most positive manner. There are 39 reverse bores available for ground water recharge. These rainwater



harvesting bores at LPU are certified by Department of Water Resources, Ministry of Jal Shakti, Government of India for the year 2019 and were checked by accredited labs.



**Rainwater Harvesting Bore at LPU**

### **Research on Diatoms: an important organism representing the quality of life below water:**

Industrial toxic discharge has an adverse effect on coastal areas and marine waters worldwide. These occurrences can be largely attributed to increased levels of eutrophication, pollutant contamination, and siltation caused by humans. According to two studies carried out in mesotrophic and oligotrophic areas, marine benthic diatoms are common, ubiquitous, and sensitive to nutrient variation in terms of ecosystems and water chemistry. Students and teachers at the School of Bioengineering and Biosciences are working on diatoms to study their role in understanding the health of water bodies.

Diatoms assemblages respond rapidly to any environmental changes. Due to their high sensitivity to environmental change, they are one of the important bio-indicators of heavy metals pollution of water bodies.



**LPU Students working in lab on diatoms study**

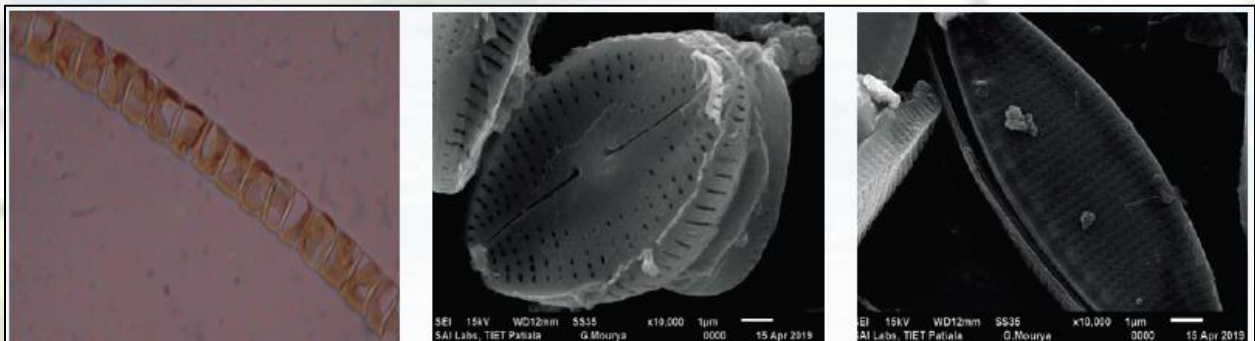


Figure: Compound microscopic image of colony of diatom *Diadesmis* sp. Diatoms are an excellent tool for reconstructing the past ecological conditions as well as indicating water characteristics.

### **Microplastic estimation and Water pollution studies of nearby water bodies and its effects onto the Aquatic ecosystem**

LPU supports research in the field of life underwater and research is carried out in this relevant field by faculty and students. To support aquatic ecosystem through education, LPU is providing compulsory input of environmental studies to its students through its academic programs. These courses help students to understand aquatic ecosystem in a better way. LPU researchers are contributing their knowledge enhancement through research in the field of microplastic estimation and water pollution studies of nearby water bodies and its effects on the living organisms.



The researchers also raised awareness about overfishing, illegal, and destructive fishing practices among the local community.

### **Conserve coastal and Marine area- through studies on Marine Benthic Meiofauna**

Efforts to understand the effects of anthropogenic activities on marine ecosystems, the LPU researcher Ms. Sanofar Khokher conducted a study for raising awareness and developing conservation strategies. Anthropogenic activities, such as pollution and habitat destruction, can have severe consequences for meiofauna and the entire marine ecosystem. By studying these impacts, researchers can work towards finding solutions to mitigate and prevent further harm.



### **For conservation of aquatic sources, LPU researchers secure patent for eco-friendly process to desalinate sea water using waste food**

A team of LPU researchers has bagged a patent from Indian Patent Office for coming up with a novel and eco-friendly process to desalinate sea water using waste food. The process has been successfully lab tested and found to be 75-80% efficient, making the sea water fit for regular household chores like – mopping, washing clothes and dishes, bathing and even irrigation. The

research was conducted by Dr. Tanay Pramanik and Dr. Runjhun Tandon, Professors at Lovely Professional University, and Mandeep Singh and Stanzin Lzaod, B.Sc. students of LPU. The existing methods of desalination generate enormous amounts of harmful chemical waste whereas this new process invented by LPU researchers uses starch from corn, rice or any other food item and generates 'zero waste'. University is now looking for commercialization of the process and once used by an industry player at large scale, it would cost just Rs.2/- to desalinate one litre of sea water.

### **Live project work related to Academics**

LPU students have undertaken an aquaponic project to explore its sustainability and increasing awareness of this food production system. Aquaponics, a combination of aquaculture (fish farming) and hydroponics (soilless plant farming), uses fish wastewater as a resource, circulating it through hydroponic grow beds where plants take up its nutrients. The filtered water is then recycled back through the fish tanks.



**Soilless plant farming using wastewater of Fish**

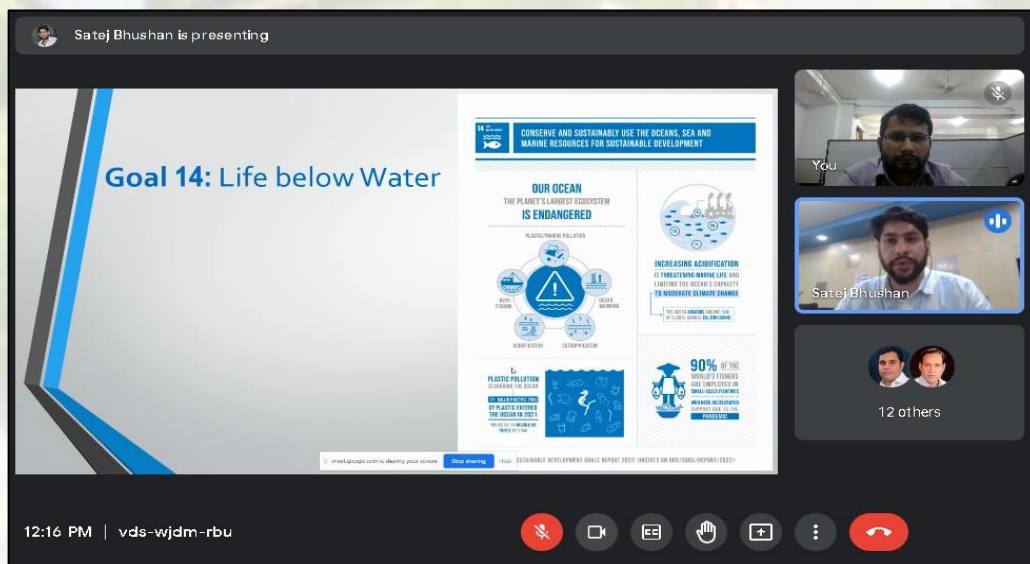
**Events on conservation and sustainable utilization of the oceans, seas, lakes, rivers and marine resources**

**Online Guest Lecture “Ecosystem Services of Seaweeds: Steps Towards Sustainable Development”**

Dr. Satej Bhusan, Project Scientist, CSIR-Central Salt and Marine Chemical Research Institute, Bhavnagar, Gujarat had delivered a lecture which aimed at raising awareness about the significant role of seaweeds in providing ecosystem services and promote their sustainable utilization for environmental and socio-economic benefits.



Brochure of an Online Guest Lecture



**Poster Competition Theme: "Aqua-Forensics: area covered: Aquatic Entomology, Marine forensic, drowning deaths and Marine toxicology"**

LPU organized poster competition event with the **Theme: "Aqua-Forensics: area covered: Aquatic Entomology, Marine forensic, drowning deaths and Marine toxicology"** on 26 March 2022. This competition was organized as a part of the weekend celebration on World Water Day and aims to engage students and researchers in exploring the fascinating realm of underwater forensics. Students had an opportunity to showcase their creativity, scientific Knowledge, and investigative skills.

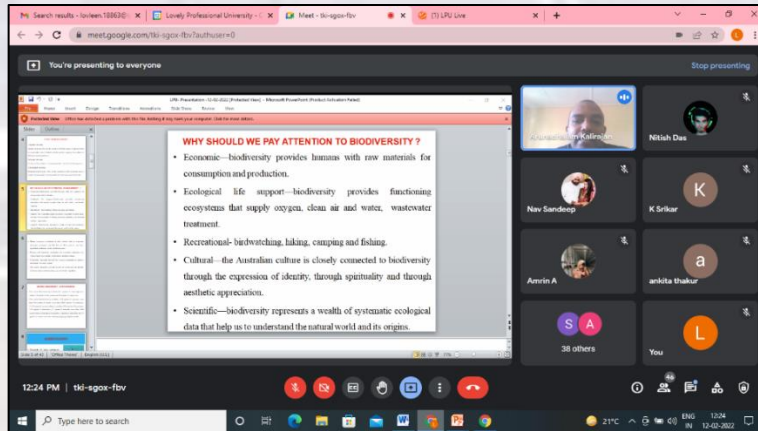


**Event glimpses**

**Online Guest Lecture on 'Influence of Pollution on Marine Biodiversity'**

LPU, as part of our ongoing efforts to create awareness and educate students about the critical issue of pollution and its impact on marine biodiversity, organized a Guest lecture titled "Influence of Pollution on Marine Biodiversity" in February 2022.

The primary objective of the guest lecture was to provide attendees with valuable insights into the far-reaching consequences of pollution on marine ecosystems and the diverse life forms they support. The speaker presented case studies and real-life examples illustrating the direct and indirect impacts of pollution on marine biodiversity.



**The speaker emphasizes the importance of preserving marine biodiversity**

### **LPU NSS activity: ‘Take the one-minute Challenge’ on World Water Day**

LPU NSS under the aegis of Department of Community Service, Student Welfare Wing is organizing \*Take the one-minute Challenge\* on World Water Day from 15th March to 22nd March 2022. The event aimed to raise awareness about water conservation and encourage participants to take simple yet impactful actions to save water in their daily lives.

**The participants must capture a 60 second video on the theme “My Ground water story”-** Groundwater situation in our locality. Let's make a positive impact on our groundwater situation, one story at a time.”. Encourage viewers to share their own stories and experiences related to their underwater qualities.







# Take the one minute challenge!

Shoot a video about groundwater – make the invisible visible!  
#MyGroundwaterStory #WorldWaterDay

Submit your entry at  
<https://tinyurl.com/nsswaterday2022>

Entry Dates  
15th March to 22nd March 2022



## Student Achievement for designing Organic Wastewater Treatment Plant Design

LPU students under the guidance of renowned faculty presented their Low Cost and Integrated Organic Wastewater Treatment Plant Design in **Icreate, Evangelise'23- Sparkup Fund** held by the Department of Entrepreneurship and Innovation. The proposed design secured first prize with a grant money of Rs.50,000.







## Student Achievement




THE STUDENTS OF BSC.(HONS) MICROBIOLOGY (AARUSHI THAKUR, ASHARFI PATHELA, OM JHA AND RISHABH RAJ) UNDER THE GUIDANCE OF OUR FACULTY MEMBERS MS. MAMTA SHARMA AND DR NEETA RAJ SHARMA PRESENTED THEIR LOW COST AND INTEGRATED ORGANIC WASTEWATER TREATMENT PLANT DESIGN IN ICREATE, EVANGELISE'23- SPARKUP FUND WHICH WAS HELD BY THE DEPARTMENT OF ENTREPRENEURSHIP AND INNOVATION. THE PROPOSED DESIGN SECURED FIRST PRIZE WITH A GRANT MONEY OF RS.50,000.

## Certificate of Achievement



## Event ‘Waste Management in Routine Life’ (LPU Happening post Dated July 2022)

LPU Verto took steps to save the Environment by conducting an event ‘Waste Management in Routine Life’ under task “Community Development Project”. The objective behind the project is to make people habituate waste management in their daily routine on their own.

As she found various issues related to waste management like no estimation of food, light, water, use of plastics, shyness to clean the waste, unplanned dumping at any place, sanitary napkins dumping, and household wastes not being reused or recycled in perfect manner.

The LPU collaborated with many organizations like **Pentaomnia, Enviro Promise, Rising Star Youth Foundation and Bloom Calendar** and these organizations helped her to implement my model in their nearby societies on a greater scale with social media campaigns.

30+ Societies and 5+ organizations have adopted her model of managing waste in routine life on their own and her target is to make whole society follow the model and recognize the importance of waste management.



LPU student conducted Outreach activities at local schools as part of the Swachh Bharat Abhiyan (Clean India Mission).



**A student creates awareness about the importance of cleanliness and proper waste management.**

### **E slogan writing Competition on: Topic: Reduce, Reuse and Recycle of Waste**

**Introduction:** The world is increasingly grappling with the menace of plastic waste, the need for immediate action has never been more apparent. Universities, as centers of learning and innovation, have a crucial role to play in promoting sustainable practices and environmental consciousness. To address this concern, our university organized a Slogan Writing Competition on the topic "Reduce, Reuse, and Recycle of Waste," aimed at raising awareness and inspiring action to reduce plastic waste on campus.

**Objective:** The primary objective of the competition was to encourage students and staff to think creatively and constructively about solutions to the plastic waste problem within the university.

By involving the academic community in this initiative, we aimed to foster a culture of environmental responsibility and sustainability.



**LOVELY PROFESSIONAL UNIVERSITY**

**E - Slogan writing competition**  
**On**  
**Reduce, Reuse and Recycle of Waste**

**Date: 21<sup>st</sup> May to 28<sup>th</sup> May 2021**  
**Submission link: [tinyurl.com/4cxfvcms](https://tinyurl.com/4cxfvcms)**

**REDUCE REUSE RECYCLE**

**Convener: Dr. Neeta Raj Sharma**    **Industry interface incharge: Dr AnjuvanSingh**  
**Co-Convener: Dr Ashish Vyas**        **Event Coordinator- Dr Jastin Samuel**

### **Promotion of Green Economy Event amongst Local school and college students of Punjab**



### **University action plan and initiatives to reduce plastic waste on campus**

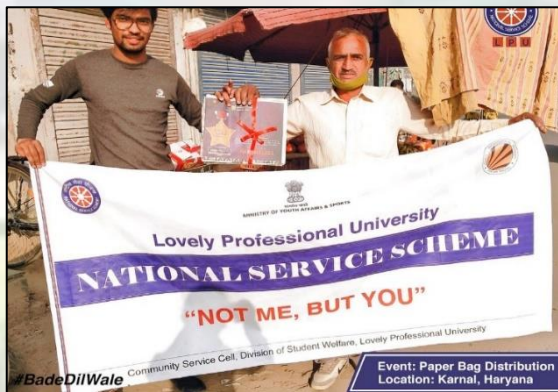
The framework covers management of all types of waste (hazardous or non-hazardous) covering biological, chemical, physical and radiological items which have the potential of causing harm to humans, animals or the environment. The collection, disposal and recycling of the waste is being carried out as per the guidelines laid by the respective government bodies. Waste is collected in color coded bins, green for wet waste and blue for dry recyclable wastes, which are managed appropriately and periodically by housekeeping staff. University prohibits the use of plastic

plasticware such as glasses, spoons etc. in the campus. Single use plastic is banned in the campus. Awareness signages are also provided at various locations of the campus.

### **Outreach Initiatives to reduce plastic waste at various community areas:**

#### **Handmade Paper Bag Distribution activity in various states of India**

It's great to hear about the initiative taken by LPUNSS volunteers to raise awareness about the environmental issues caused by plastic bags. Using handmade paper bags made from newspapers is an eco-friendly alternative to plastic bags and distributed them in more than 20 states of India is a commendable effort to reduce plastic pollution. This initiative is a positive step towards a cleaner and more sustainable future.



#### **Celebration of International Plastic Bag free Day**

On International Plastic Bag free Day LPUNSS organized plantation drive under My Pet Plant in collaboration with Dr. Rambir Gulia program coordinator NSS Maharishi Dayanand University. (03 July 2021)



## “Swachta Abhiyan and Say No to Plastic Rally” at local community

LPU-NSS in association with Municipal Corporation Phagwara organized " Swachta Abhiyan and Say No to Plastic Rally " in Phagwara on 150th Birth Anniversary of Mahatma Gandhi Ji in which LPU volunteers along with Union Minister of State for Commerce and Industry, Government of India Shri. Som Prakash and the officials of Municipal Corporation Phagwara conducted a rally in which they spread the prime message of cleanliness and stopping the use of plastic to the public and the local shopkeepers and vendors and warned them about the harms related to it and the hazards that it may cause.



### Future Plans:

University aims at minimizing and addressing the acidification of water bodies. Awareness of maintaining the sustainable approach toward the conservation of Aquatic ecosystem and Its biodiversity in the private sector is still low. LPU framed its future targets to meet the goals as assigned by UN SDG's governing body and working in line with the UN SDG 14 to achieve the goal by 2029.

### Conclusion:

In conclusion, LPU makes every effort to improve the life of species present under water through the sustainable utilization and conservation of aquatic resources. LPU is continuously creating

awareness for the cleanliness and betterment of the health of water bodies among the students and local areas.

## **15. Life on Land**

The preservation of terrestrial ecosystems is crucial due to the increasing threats they face. Lovely Professional University is leading in managing natural resources, promoting sustainable agriculture, and enhancing biodiversity. They are committed to a future that balances human needs with the preservation of these precious ecosystems, aiming to create a world where prosperity coexists with ecosystem preservation. Their shared responsibility is to ensure a balanced and thriving future.

### **Academic and Research Initiatives**

The university offers a wide range of courses in educational programs on ecosystems for local or national audiences.

LPU is working to address the UN Sustainable Development Goal of "Life on Land" by addressing pesticide-contaminated soils and promoting sustainable land management. The university is actively involved in remediation methods, monitoring soil health, and developing solutions to degrade pesticides in wastewater. This aligns with SDG 15's mission of protecting and revitalizing life on land.

### **LPU Patents**

University researchers are working on novel crop fertilization practices, soil health restoration, pest control, and disease detection to address the imminent danger to terrestrial ecosystems and align with SDG 15 goals.

### **Consultancy and Funding Projects**

Lovely Professional University (LPU) is working towards SDG 15 goals by implementing consultancy-based projects using AI and IoT for waste disposal, soil health testing, and report preparation.

*The university sponsors and plans initiatives to encourage the preservation and wise use of all land, including forests and wild areas. Among the many activities the university hosts are:*

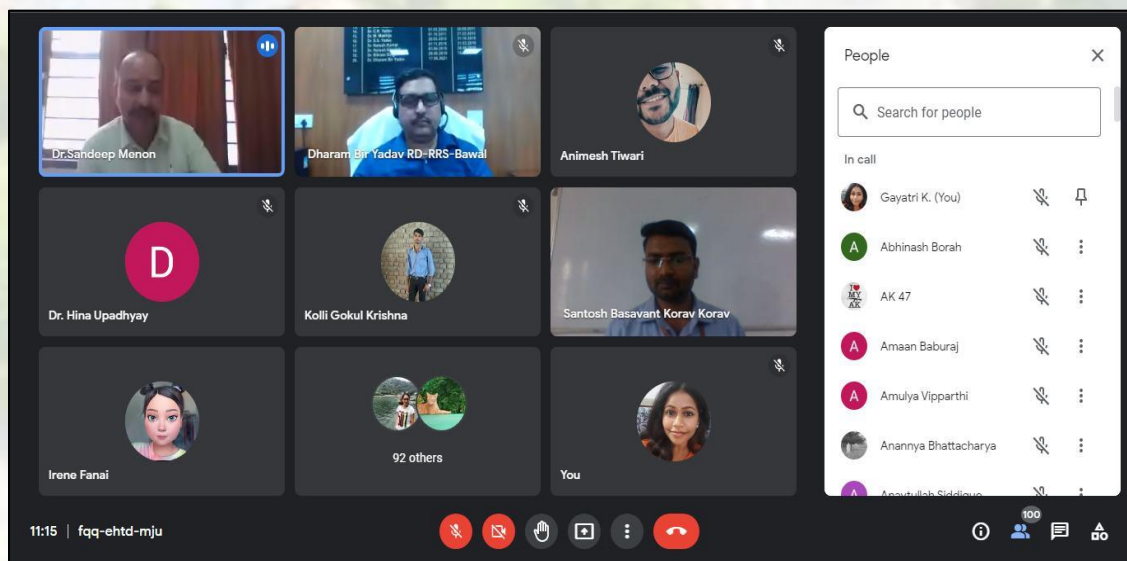
*1. National Farmers Day: outreach (27 December 2021)*



<https://www.facebook.com/LPUAgriculture/posts/309961847806189>

*2. Discussion on the recent agricultural technology with farmers on multi-stakeholder innovation platform under outreach program (23<sup>rd</sup> Oct, 2021)*

*3. Guest Lecture: Resource conservation technologies for sustainable agriculture (21 March, 2022)*



<https://www.facebook.com/LPUAgriculture/posts/363506805785026>

4. *Sustainable use of Land: Experiential learning program at LPU agriculture land: State-Of-The-Art Commercial Beekeeping (22 April 2022)*

<https://www.facebook.com/LPUAgriculture/posts/384204510381922>

5. *Workshop on Recent Advances in Detection and Diagnosis of Plant Viruses (13th May, 2022)*

<https://www.facebook.com/LPUAgriculture/posts/398745512261155>

6. *World Bee Day-2022 (20 May 2022)*

<https://www.facebook.com/LPUAgriculture/posts/407766554692384>

7. *Farmers Camp: Direct Seeded Rice Technology (30 May, 2022)*

<https://www.facebook.com/LPUAgriculture/posts/410562921079414>

8. *Initiative to grow direct seeded rice instead of conventional puddled transplanted rice: (1 July, 2022)*





<https://www.facebook.com/LPUAgriculture/posts/432784745523898>

9. *Celebration of World Soil Day at LPU : (5 December 2022)*

<https://www.facebook.com/LPUAgriculture/posts/563209425814762>

10. *International Conference on Sustainability: Life on Earth 2021*

11. *International Conference on Plant Physiology and Biotechnology-2021*

12. *International Conference on Bioengineering and Biosciences-2022 (ICBB-2022)*

## **16. Peace, Justice and Strong Institutions**

### **Introduction**

The sustainable development goals have been initiated in 2015. Out of 17 UN SDGs, the main aim of SDG 16 is Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels. Lovely Professional University has demonstrated a strong commitment to the principles and objectives outlined in SDG 16. Through its various initiatives, policies, and collaborations, LPU has been actively promoting peace, justice, and the development of strong institutions. This report highlights the key areas such as research publications, stakeholder engagement, Governance, and local community participation in LPU. LPU's dedication to these important aspects of SDG 16 demonstrates its role as a responsible and socially conscious institution.

### **Academic Initiatives**

Lovely Professional University (LPU) has taken academic initiatives to make students understand about the various issues related to SDG 16. University is running multiple courses addressing the needs of UN SDG 16 for sensitizing students about the social issues to boost their conscious about the importance to different stakeholders. University is running courses mapped with SDG 16 at Undergraduate and Post-graduate level supporting the integration of interdisciplinarity and sustainability in all study cycles. Following is list of some of the courses addressing the needs of SDG 16:

### **Research Initiatives**

LPU is committed to prioritize its research work in achieving goals of sustainability. LPU faculty is committed in carrying out its research work and publishing numerous research in various reputed journals on global issues as well as national issues. Some of the titles of research papers are mentioned here:

Sr. No.	Research paper details
1	Wani, Zahoor Ahmad. "Afghanistan's Neo-Taliban Puzzle." <i>South Asia Research</i> 41.2 (2021): 220-237.
2	Kumar, Shiv, Sudheer Singh Verma, and Shahbaz Hussain Shah. "Indo-US Convergence of Agenda in the New Indo-Pacific Regional Security Architecture." <i>South Asia Research</i> 40.2 (2020): 215-230.
3	Kaur, Rupinder, Pretty Bhalla, and Afroze Nazneen. "US-China Trade Conflicts: Review on Gains or Losses?." <i>Research in World Economy</i> 11.1 (2020): 28-33.
4	Raj, Abhishek, et al. "Women Empowerment and Social Development Through Joint Forest Management: Indian Perspective." <i>Advances in Sustainable Development and Management of Environmental and Natural Resources: Economic Outlook and Opinions, 2-volume set</i> (2021): 59.
5	AhmadBhat, Javeed, and C. S. Rajeesh. "Political rights, citizenship and the marginalised refugees: The case of tibetans in Nepal." <i>International Journal of Recent Technology and Engineering</i> 7.6 (2019).

Conferences: Every year, University organizes multiple national and international conferences on various issues, more importantly on Sustainable Development Goals (SDGs) to address the needs of local society or community and students.

**List of some of the conferences held on SDGs is given below:**

Name of Conference	Date of Conference
3rd International Conference on Sustainable Developmental Goals and Management Practices	11-12 February, 2022
International Conference on Sustainability Life on Earth 2021 (ICS-LOE 2021)	17-18 December, 2021
International Conference on Recent Trends in Smart and Sustainable Agriculture For Food Security (SSAFS – 2022)	21-22 January, 2022

### **Guidelines and Framework**

LPU provides democratic rights to all the students which further leads to elected representation in various University committees/bodies and councils such as the Internal Quality Assurance Cell, Internal Complaints Committee, and Anti-Ragging Committees. These committees also have faculty representation to discuss various academic and administrative issues. To view such committees, [click here](#). LPU faculty also has equal rights and participation in various governing bodies of the University such as the Academic Council, Academia-Industry Interface Council, and many more.

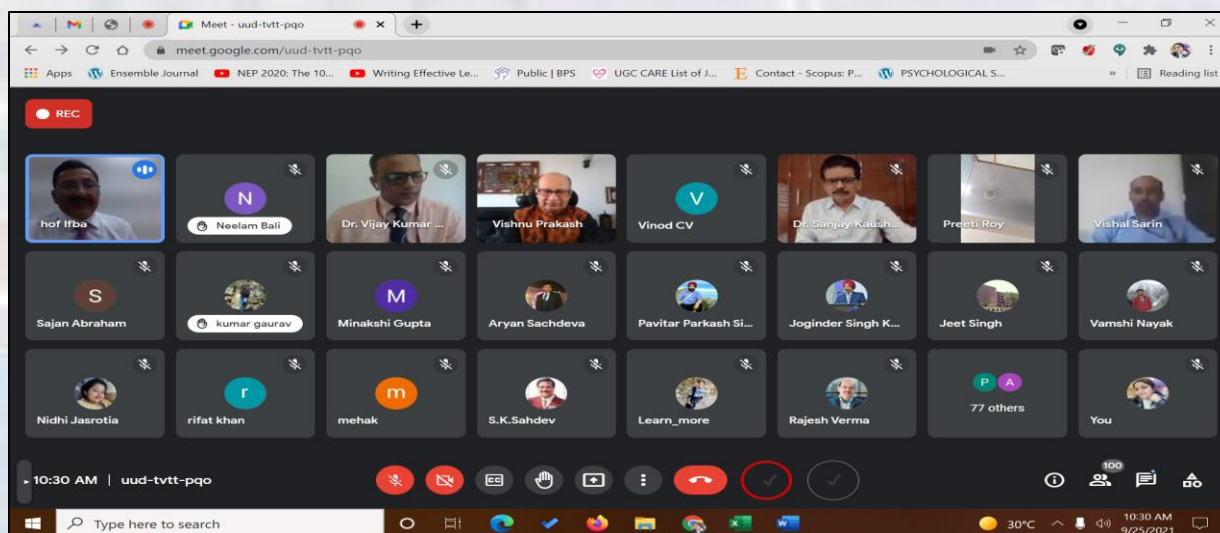
LPU's student council is free to conduct various activities without unnecessary interference by providing necessary guidance as and when required by them. This student council provides a wide scope in the contribution of the development of student's planning, organizing, leadership skills and volunteering for various events such as social activities, cultural, sports and other educational/political/welfare/academic activities. To view the University's student council.

### **Campus Engagement Activities**

LPU recognizes the importance of achieving peaceful and inclusive societies, ensuring access to justice, building effective, accountable, and inclusive institutions at all levels. This outlines the initiatives and efforts undertaken by LPU to promote peace, justice, and strong institutions within its educational environment and especially for the local community.

LPU has demonstrated a strong commitment to SDG 16 by organizing numerous events and conferences focused on promoting peace, justice, and strong institutions. One important example of this is providing democratic rights to students to select students for student councils.





**373 delegates including 14 International delegates** (from Malawi, Nigeria, Saudi Arabia, Bhutan, and Afghanistan.) presented their papers at this conference. The conference mainly highlighted on the issues and various challenges on Equality, Diversity, and Inclusivity from multiple perspectives. The conference was marked with the presence of 2 guest speakers namely **Prof. Sanjay Kaushik, Honorary Director, ICSSR North-Western Regional Centre (NWRC), and Guest of Honour Mr. Vishnu Prakash, Former Indian High Commissioner to Canada.**

### *A guest lecture on “Tourism, Peace, Justice & Strong Institutions: Trends and Prospects”*



On 28 April 2022 A guest lecture on “Tourism, Peace, Justice & Strong Institutions: Trends and Prospects” was conducted by the Tourism and Airlines Domain: School of Hotel Management and Tourism, LPU for the school's first-year students. **Mr. Ajay Prakash, Founder and President of IIPT-India (International Institute for Peace through Tourism - India); Chief Executive of Nomad Travels, Mumbai; President of TAFI–Travel Agents Federation of India and ex Dy. Chairman of the WTAAA–World Travel Agents Association Alliance and Chief Executive, Nomad Travels, Mumbai,** delivered the talk.

## *‘Say No To War’ – Peace Rally*

On 5 Mar 2022 a ‘Say No To War’ – Peace Rally was organized by the Division of Art & Culture, Student Welfare Wing, LPU with the motive ‘Say No to War’ to dispel darkness and spread the message of peace in the world. The students had gathered outside Block 25 for the Peace Rally, queuing up in 5 rows holding ‘No War’ placards and banners. They were shouting ‘No War Know Peace’ Anti-war slogans throughout the rally, thereby promulgating the idea of ‘Unite Peace and Create Peace.’ Students/Faculty/Staff/Heads of various departments came--together for this great cause to spread the message of peace and harmony for a united brotherhood amidst this on-going unrest in the world. Candles were lit in front of the Amphitheatre in memory of those who lost their lives in the shelling and fight of the Russian offensive in Ukraine.





LOVELY  
PROFESSIONAL  
UNIVERSITY  
*Transforming Education, Transforming India*



**SHRI ASHWANI KUMAR**  
Office of Vigilance Bureau  
Unit Kaputhala

WEBINAR ON  
**VIGILANCE AWARENESS SEMINAR**

Date: 1st November (Monday)  
Time: 10:00 AM - 12:00 Noon



Google Meet

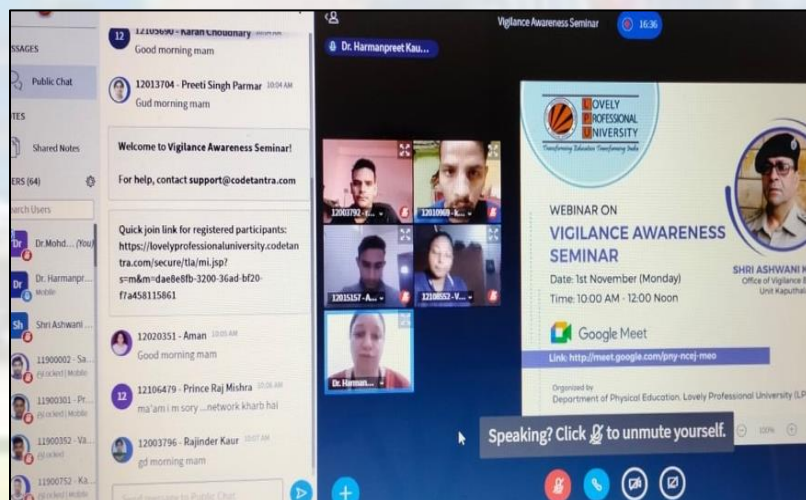
Link: <http://meet.google.com/pny-ncej-meo>

Organized by  
Department of Physical Education, Lovely Professional University (LPU)

On 1 Nov 2021 Department of physical education and Sports, LPU organized a well-appreciated initiative to conduct a guest lecture on Vigilance Awareness Seminar to encourage all stakeholders to collectively participate in the prevention of the fight against corruption and raise public awareness regarding its existence. This lecture provides support and develops a deeper understanding of corruption among the students.

A webinar and live interactive session entitled “**Webinar on awareness for corruption**” conducted by the **Sh. Ashwani Kumar Deputy Superintendent of Police** under the aegis of **Lovely Professional University**. **Sh. Ashwani Kumar** interacted with all the students and faculty members and shared his life experience dealing with corruption and he suggested to all participants how to reduce corruption. He answered all the queries of the student’s related corruption very diligently.

### ***Guest Lecture on “Awareness regarding violence against Women”***



On 25 Nov 2021, An Exclusive Guest Lecture on the Topic “Awareness regarding violence against Women” was conducted through the Zoom platform. **Mr. Deepak Ramola, Wisdom Historian, Educator, and Poet Dehradun**. **Deepak Ramola** is the **Founder and Artistic Director of Project FUEL**. A two-time TED Talk speaker & UN Action Plan

**Executor**, he also previously served as the **Kindness Ambassador for UNESCO MGIEP**. **Deepak Ramola** shared from his experience, the understanding of life lessons of women regarding the risk of violence starts early for many women and girls. He told that Awareness can equip students with knowledge and skills to challenge gender-based violence, promote respect, and advocate for a more inclusive society. By generating awareness among students about violence against women, schools can play a vital role in promoting SDG 16's objectives of peace, justice, and inclusivity.

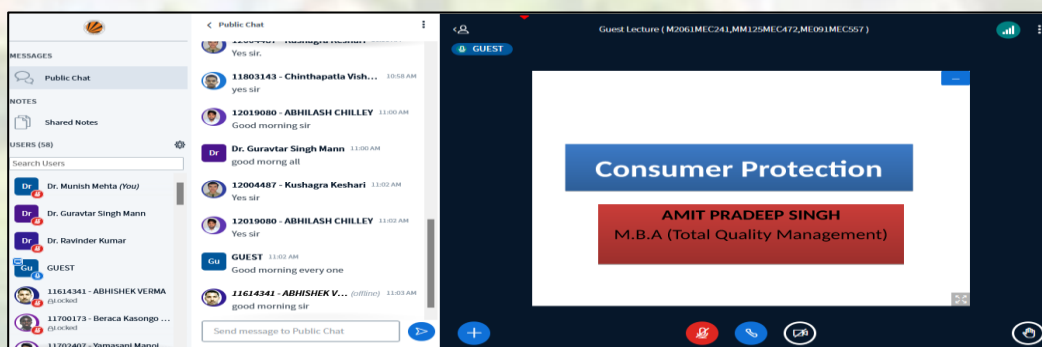
### ***Online Event ‘Human Rights for Indian Citizen’***

On 30<sup>th</sup> Mar 2022, an online event was conducted in view of ‘Human Rights for Indian Citizen’ by **Dr. Rekha Kumari R. Singh, I/c Dean, Faculty of Law, Sardar Patel University, Vidhyanagar**. In this event, different sections of Protection of Human Rights Act, 1993 have been discussed. In the session, the **Universal Declaration of Human Rights** was highlighted.



### *Guest lecture on "Awareness of Consumer Rights"*

On 8<sup>th</sup> April 2022 in virtual mode, a guest lecture was organized by the School of Mechanical Engineering, LPU. Consumer Awareness is an act of making sure the buyer or consumer of the information about products, goods, services, and consumer rights. Consumer awareness is important so that buyers can take the right decision and make the right choice. Consumers have the right to information, the right to choose, the right to safety, the right to hear, the right to seek, and the right to consumer education. The guest speaker, **Mr. Amit Pardeep Singh, Quality Head India at Albea India, Baddi, (H.P)**, delivered an enlightening talk. He emphasized that awareness of consumer rights empowers individuals against market abuses and social injustices, aligning with **SDG 16's goal of promoting justice, fairness, and inclusivity**. **United Nations guidelines for consumer protection** were discussed clearly with the help of examples.



### *Alternative Dispute Resolution (ADR) society Logo making competition.*

On 7 Oct 2022, School of Law organized a logo making competition for ADR SOCIETY of the school in the context of peace, justice, and SDG 16 serves as a platform to raise awareness, engage the public, visually represent the goals of SDG 16, and inspire collaboration towards achieving a more peaceful and

just society. The objective was to **promote peaceful dispute resolution, raising awareness of justice and rule of law, Visual representation of SDG 16**, Community involvement, Talent recognition and Inspiring collaboration and partnerships.

## **Commemorating important days of various countries within the campus**

As an example of peaceful and strong institute, LPU is spreading equality and harmony among its students. As LPU having numerous students from different countries, celebrating their Independence days and National days along with other national/international students every year to give them feeling like home which ensures their peaceful stay in the University campus. Recently, LPU students celebrates

<b>Title</b>	<b>Date of event</b>	<b>Social Media link</b>
Zimbabwe's Independence Day	20 April 2023	<a href="https://www.facebook.com/dsw.lpu/photos/a.359488487470376/6111616345590866/">https://www.facebook.com/dsw.lpu/photos/a.359488487470376/6111616345590866/</a>
Celebrating the 60th Independence Day of Tanzania	11 December 2021	<a href="https://www.facebook.com/photo/?fbid=4616240738461775&amp;set=pcb.4616240861795096">https://www.facebook.com/photo/?fbid=4616240738461775&amp;set=pcb.4616240861795096</a>
Celebrate 114th National Day of Bhutan	18 December 2021	<a href="https://www.facebook.com/photo/?fbid=4643787422373773&amp;set=pcb.4643789182373597">https://www.facebook.com/photo/?fbid=4643787422373773&amp;set=pcb.4643789182373597</a>

Zimbabwe's Independence Day and list of others is given below:

### ***Visit of various national & international dignitaries***

Over the years, multiple world-renowned dignitaries and personalities using LPU's podium for the neutral & frank discussion on various social issues. LPU witnesses appearance of political stakeholder and ambassadors from various countries in the recent years. Following is the list of ambassadors from various countries:

Division of International Affairs, Lovely Professional University celebrated Zimbabwe's Independence Day. While hoisting the flag, faculty and students honoured the struggles and sacrifices of the Zimbabwean people who fought for their freedom and independence.



***Flag hoisting on 114th National Day of Bhutan***



Sr. No.	Name and other details
1	Her Excellency, Ms. Caroline Rowett, Deputy High Commissioner of the <b>United Kingdom</b> , visited LPU on 14 <sup>th</sup> June 2022.
2	His Excellency, Mr. Mustapha Jawara, Ambassador of <b>Gambia</b> visited LPU on 6 <sup>th</sup> August 2022.
3	His Excellency, Mr. Ganbold Dambajav, Ambassador of <b>Mongolia</b> visited LPU on 21 <sup>st</sup> December 2022.
4	His Excellency, Mr. Ganbayar Ganbold, Deputy Minister of Education, <b>Mongolia</b> , visited LPU on 21 <sup>st</sup> December 2022.
5	His Excellency, Mr. Abdalla Omer Bashir Elhusain, Ambassador of <b>Sudan</b> visited LPU on 6 <sup>th</sup> June 2023.

His Excellency, Ambassador of the Republic of Sudan, Abdalla Omer Bashir Elhusain along with Deputy Head of Mission, the High Commission of Ghana to India, Louis Kwame Obeng visited LPU.



H.E. Mr. Ganbold Dambajav, Ambassador of Mongolia to India, along with other esteemed dignitaries visited LPU.



Chief Minister of Punjab Shri Bhagwant Mann interacted with people with Spinal Cord Injuries at the LPU campus. <https://www.lpu.in/inst-performance/vistaar.php>

### *Future plans*

1. Substantially reduce corruption and bribery in all their forms
2. Encourage the national rule of law and make sure that everyone has access to justice
3. Ensure that decisions are made in timely, inclusive, participatory and fair manner at all degrees
4. To develop effective, accountable and transparent system at all levels
5. Promote and enforce non-discriminatory laws and policies for sustainable development
6. Ensure public access to information and protect fundamental freedoms
7. To reduce all forms of violence

## 17. Partnership for The Goals

Excellence in teaching, learning, research, international involvement, entrepreneurship, and leadership underpins this award. Lovely Professional University actively builds meaningful interactions and partnerships with government and non-government institutions, universities, corporations, NGOs, recruiters, parents, alumni, staff, and the community to achieve this mission. LPU recognises these stakeholders' vital role in the university's performance and the need for positive partnerships to address global sustainability issues.

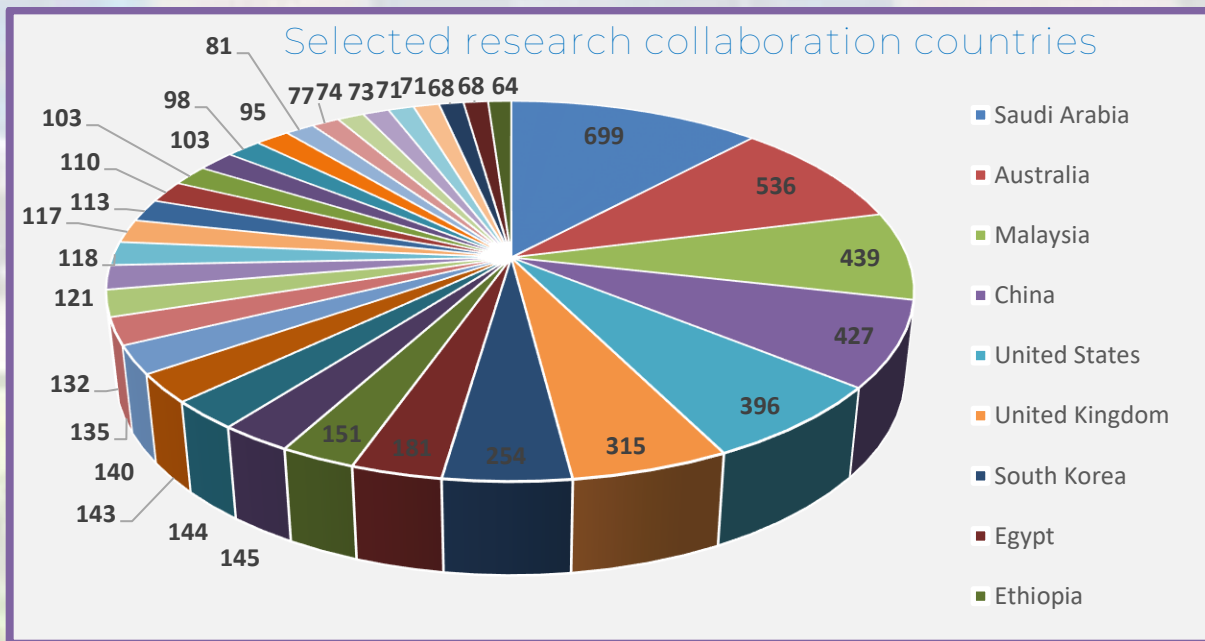
LPU works with governmental and corporate sectors, NGOs, charities, and research institutes to make sustainable development links. The institution actively participates in teaching, research, and community-oriented programmes to demonstrate its social responsibility and civic involvement in higher education. LPU seeks varied international relationships to address local, national, and global challenges.

As a globally connected university, LPU collaborates seamlessly to give students an international, UN SDG-focused education. The global linkages allow researchers to get valuable knowledge and enrich their academic travels. LPU also values open and productive stakeholder communication. The university uses cross-sectional discussions to improve its academic programmes. LPU strengthens its academic fabric and improves society through these collaborations.



## Academic and Research Initiatives

Research collaboration and partnerships for sustainable development help achieve the Sustainable Development Goals. SDGs' global challenges are complex, thus collaborative research brings together various expertise, views, and resources to solve them. LPU collaborates with regional, national, and international academic and research institutions, both government and non-government, to ensure a holistic understanding of sustainable development challenges and encourage innovative and comprehensive solutions.



## LPU Patents

University researchers are working on novel crop fertilization practices, soil health restoration, pest control, and disease detection to address the imminent danger to terrestrial ecosystems and align with SDG 15 goals.

## Consultancy and Funding Projects

Colleagues worldwide and in low- and low-middle-income nations. Accordingly, L University researchers have PU publications with authors from 121 countries, including Egypt, Ethiopia, Iran, Nigeria, Jordan, Pakistan, Bangladesh, Morocco, Lebanon, Afghanistan, Papua New Guinea, Algeria, Tunisia, Nepal, Sudan, Ghana, Angola, Uganda, Bhutan, Uzbekistan, Syrian

Arab Republic, Philippines, Rwanda, Tanzania, Yemen, Zambia, Cameroon, Kenya, Lesotho, Malawi, Niger, Somalia, and Sri Lanka.

Additionally, collaborative research initiatives frequently receive more financing. International organisations, governments, and philanthropic foundations sponsor multi-stakeholder initiatives. This financing expands research, enabling larger, more impactful studies. Collaborative research also promotes international cooperation and understanding, helping governments and organisations achieve SDG 17 and the Sustainable Development Agenda's ambitious goals.

<b>Name of the Project</b>	<b>Funding Agency</b>	<b>Key Focus area</b>	<b>Sustainable Development Goal addressed</b>
Cybersecurity for all - CS4ALL	Erasmus+: Higher Education - International Capacity Building	Cybersecurity Strategy in the Digital Decade and aims to enhance collective capabilities to respond to major cyberattacks.	SDG9: Industry, Innovation, and Infrastructure SDG11: Sustainable Cities and Communities SDG16: Peace, Justice, and Strong Institutions SDG17: Partnerships for the Goals
Use of ghee in the common culture heritage and dairy products of Nomadic countries along the Silk road	UNESCO	Use of ghee from milk products as common household product for cooking and other purposes	SDG2: Zero Hunger SDG11: Sustainable Cities and Communities SDG17: Partnerships for the Goals
Possible alternatives to rice-wheat cropping system in Punjab, India	RIHN, Japan	Promoting sustainable practices and Ensuring the long-term viability of agriculture.	SDG1: No Poverty SDG2: Zero Hunger SDG11: Sustainable Cities and Communities SDG12: Responsible Consumption and Production SDG13: Climate Action

			SDG15: Life on Land SDG17: Partnerships for the Goals
Entrepreneurship in Food	Department of International Trade, Newport United Kingdom	Creation of sustainable food and their corresponding eatables.	SDG1: No Poverty SDG2: Zero Hunger SDG11: Sustainable Cities and Communities SDG12: Responsible Consumption and Production SDG13: Climate Action SDG15: Life on Land SDG17: Partnerships for the Goals
EU-SPIRIT (Sport and Physical education as a vehicle for Inclusion and recognition in India, Indonesia and Sri Lanka	Erasmus+: Higher Education - International Capacity Building	Growing chronic noncommunicable diseases (NCDs) and huge global health problem in low- and middle-income countries. Young people need free time, space and fellowship to enjoy sport and play.	SDG3: Good Health and Well-being SDG8: Decent Work and Economic Growth SDG11: Sustainable Cities and Communities SDG17: Partnerships for the Goals

***The university sponsors and plans initiatives to encourage the students and researchers. Among the many activities the university hosts are:***

***1. 3rd International Conference On Sustainable Developmental Goals And Management Practices***

***<https://conferences.lpu.in/sdgmpp/>***

2. *International Conference On Revitalizing Social Institutions For Peace, Justice And Environmental Protection*

<https://conferences.lpu.in/rsipjep/>

3. *First International Conference On Innovation And Intellectual Property Rights*

<https://conferences.lpu.in/iaipr/>

4. *Microbial Bioprospecting Towards Sustainable Development Goals*

<https://conferences.lpu.in/icmbsdg/>

5. *International Conference on Feminine Hygiene Management- Beyond Taboo (ICFHM-2022)*

<https://conferences.lpu.in/icfhm/#:~:text=ABOUT%20ICFHM&text=LPU%20cordially%20invites%20you%20to,awareness%20to%20enlighten%20the%20society.>

6. *International CONFERENCE ON "Equality, Diversity and Inclusivity: Issues and Concerns"*

<https://conferences.lpu.in/ediic/>

7. *5th Neo-International Conference on Habitable Environments & International Professional Meet (NICHE IPM 2023)* <https://conferences.lpu.in/niche-ipm/>

8. *International Conference On Sustainability Life On Earth 2021 (ICS-LOE 2021)*

<https://conferences.lpu.in/ics-loe/>

9. *International Conference On Recent Trends In Smart And Sustainable Agriculture For Food Security (SSAFS – 2022)* <https://conferences.lpu.in/ssafs/>

10. *International Conference On Advances In Material Science and Technology (ICAMST-2022)*

<https://conferences.lpu.in/icamst/>

## LINK TO SDG WISE ANNUAL REPORT

<b>Sustainable Development Goal</b>	<b>Web Link to SDG Report</b>
SDG 01: No Poverty	<a href="#"><u>Click Here</u></a>
SDG 02: Zero Hunger	<a href="#"><u>Click Here</u></a>
SDG 03: Good Health and Well Being	<a href="#"><u>Click Here</u></a>
SDG 04: Quality Education	<a href="#"><u>Click Here</u></a>
SDG 05: Gender Equality	<a href="#"><u>Click Here</u></a>
SDG 06: Clean Water and Sanitation	<a href="#"><u>Click Here</u></a>
SDG 07: Affordable and Clean Energy	<a href="#"><u>Click Here</u></a>
SDG 08: Decent Work and Economic Growth	<a href="#"><u>Click Here</u></a>
SDG 09: Industry Innovation and Infrastructure	<a href="#"><u>Click Here</u></a>
SDG 10: Reduced Inequalities	<a href="#"><u>Click Here</u></a>
SDG 11: Sustainable Cities and Communities	<a href="#"><u>Click Here</u></a>
SDG 12: Responsible Consumption and Production	<a href="#"><u>Click Here</u></a>
SDG 13: Climate Action	<a href="#"><u>Click Here</u></a>
SDG 14: Life Below Water	<a href="#"><u>Click Here</u></a>
SDG 15: Life on Land	<a href="#"><u>Click Here</u></a>
SDG 16: Peace Justice and Strong Institutions	<a href="#"><u>Click Here</u></a>
SDG 17: Partnerships for the Goals	<a href="#"><u>Click Here</u></a>





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**P** ROFESSIONAL  
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