17 PARTNERSHIPS FOR THE GOALS

Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development

17.4.4 Sustainable Literacy

A multidimensional method that evaluates both comprehension and implementation is used to evaluate university students' capacity to acquire and maintain important sustainability literacy concepts. Here are a few successful tactics:

Formative Evaluations: Students' comprehension of sustainability topics can be continuously assessed through frequent assessments, brief exams, and reflective tasks. Key definitions, concepts, and case studies may be the subject of these evaluations.

Project-Based Learning: Students are able to utilize their knowledge in real-world settings by working on projects that tackle sustainability issues. Innovation, solution efficacy, and teamwork are examples of criteria for assessment.

Capstone Projects: Students are encouraged to incorporate and utilize sustainability themes across a variety of fields when they are involved in extensive capstone projects. Research excellence, inventiveness, and problem-solving skills can all be evaluated.

Portfolios: Asking students to compile their learning experiences in sustainability into portfolios can give a comprehensive picture of how well they comprehend and remember important ideas. Projects, reflections, and other pertinent community involvement initiatives may fall under this category.

Collaborative Learning: Giving students the task of instructing their friends on a sustainable subject will help them grasp it more thoroughly. Clarity, involvement, and question-answering skills can all be taken into account during assessment, which strengthens their understanding of the subject.

Group conversations and Demonstrations: Students' capacity to express their comprehension and interact effectively with the subject matter can be evaluated by encouraging conversations and mandating presentations on sustainability-related subjects.

Reviews and Questionnaires: Students' opinions regarding their own learning and the efficiency of instructional strategies can be gathered through surveys, which can provide information about how well they believe they are understanding sustainability literacy.

Community-Based Learning: Assessing students' involvement in sustainability-related community service initiatives can show how well they can apply ideas in practical settings and consider their effects.

Capstone Reflections: Students' memory and implementation of important concepts can be evaluated by encouraging them to consider their sustainability-related learning experiences in a capstone project or paper.

Combining these techniques allows teachers to assess students' sustainability literacy in an efficient manner, making sure that they have not only learned important ideas but also comprehend their applicability and significance in practical settings.

Design Project - EXSEL

A design project conducted at the University for the welfare of the community involves collaborating directly with community members to identify their needs and challenges. In this initiative, students gather problem statements through surveys, interviews, or workshops, ensuring that the projects are grounded in real-world issues faced by the community.

Once the problems are identified, students work in teams to develop innovative solutions, applying their design and engineering skills. These projects not only address specific community needs but also encourage students to engage with the community, fostering collaboration and understanding. The outcome may include prototypes, strategic plans, or other tangible deliverables that can be implemented to improve the quality of life for community members. This hands-on approach helps students learn about social impact while contributing to the welfare of the community.

Report on EXSEL

https://docs.google.com/document/d/1ARxki8tSPAoUPlYtAkQ7wGP6xUrjcIWe/edit?usp=drive_link&ouid=113938024005760959391&rtpof=true&sd=true

Community Service/Focused Project

A community service or focused project at a university is designed to engage students in meaningful work that benefits local communities. These projects often involve collaboration with community organizations and address specific social, economic, or environmental issues. Students can gain practical experience while developing skills such as teamwork, leadership, and problem-solving.

Typically, these initiatives encourage students to apply their academic knowledge in real-world contexts, fostering a sense of social responsibility and civic engagement. Projects may include activities like tutoring, environmental conservation, health awareness campaigns, or infrastructure development, contributing positively to both the community and the students' personal growth.

Some of the Sustainable Community Service projects by students are listed below.

Beneficiaries	Title	Participants	Project duration
Women Safety	GPS and Live Tracking Arduino Device for Women Safety	6	3 months
Women Safety	Women Safety Android	4	4 months
Public.Drivers	Enhancing Multilingual Interaction with Language translation	5	6 months
Public.Drivers	Predicting the quality of vegetables by using learning application with machine	8	3 months
Public.Drivers	Implementation of Automatic IoT based Solar power tracking system	10	3 months
Public.Drivers	Railway Track crack detection	6	4 months
Public.Drivers	Quality Assurance of Milk	5	4 months

Public.Drivers	Caretaker management for old people using IOT	5	4 months
Public.Drivers	ATM crime detection using image processing integrated video surveillance	4	3 months
Educators	University management System	10	3 months
Educators	Student Feedback System	8	4 months
Educators	Automated Student Attendance System using Fingerprint Recognition	5	4 months
Educators	Sign Language to Text using Machine Learning	10	3 months
Educators	Career Guidance for Students	100	3 months
Farmers	Former friendly Agri App	20	3 months
Farmers	Organic Farming, Crop Recommendation	10	4 months
Farmers	Crop yield Prediction	8	6 months
Farmers	Smart Irrigation system	15	6 months
Farmers	Farm to Home	20	6 months
Farmers	Rice leaf desease detection system using CNN Algorithm	24	4 months
Farmers	S13/01- crop yield prediction using multiple linear regression	8	4 months
Farmers	Crop Disease Detection and Predict Pesticides	6	3 months
Domestic people/Gas Agencies	Air Pollution Monitoring System for Rural Areas	5	4 months
Drivers/Police	Traffic Management using Deep Learning	8	3 months
Drivers/Police	Emergency Vehicle Priority System	8	4 months
Drivers/Police	License Plate Recognition using Computer Vision	5	3 months
Drivers/Police	Traffic Violation Detection	8	3 months
Drivers/Police	Driver Drowsiness and Alcohol Detection System	8	4 months
Engineers-Hardware	Detection of Helmet to enhance Road Safety	5	3 months
Electricians	Residential Electricity theft detection	6	4 months

Fireman/ Officers	Automatic Fire Extinguisher for households and buildings using Arduino	5	4 months
Garbage collector	soil quality detection	10	3 months
Garbage collector	Fuel from Plastic	10	3 months
Garbage collector	Household Services	20	4 months
Women	Crime rate prediction	6	4 months
Fire Department	Safety Mechanism for shredder system using computer vision	4	4 months
Agriculture and Farmers	Agro Tech	8	3 months
Agriculture and Farmers	Digital Agriculture Technology	8	3 months
Agriculture and Farmers	Potato disease prediction using machine learning	10	4 months
Agriculture and Farmers	Weather prediction for farmers to prevent crop from destruction	20	6 months
Agriculture and Farmers	Web application for crop prediction leaf disease detection and fertilizer prediction	20	6 months
Agriculture and Farmers	Advanced Automated Farming System - Seeding in Future	10	6 months
Agriculture and Farmers	Sustainable farming through AI enhanced Recommendation	5	3 months
Household and Industrial purpose	Detecting defects in manufacturing process	5	4 months
Physically Challenged	Indian sign language Detection	5	3 months
Public	Food collection and distribution	10	4 months
Public	Weather forecasting	10	4 months
Public	Ideas of community clean up smart trash cans	5	4 months
Public	Health disease prediction using Mobile Application	5	3 months
Public	Helmet and Number plate detection	5	3 months

Public	Credit card fraud detection	10	6 months
Public	Garbage fill monitoring and automatically municipal reporting system	5	3 months
Public	Water Management in community	10	3 months
Public	Recycling Revolution	8	3 months
Public	Smart Dustbin System	12	4 months
Public	Fake News Detection	5	3 months
Drivers	Drowsiness detection of drivers	5	3 months
Health	Disease prediction using symptoms	5	3 months
Health	Parkinson's disease detection	5	3 months
Health	Brain tumor image recommendation	5	4 months
Health	COVID -19 Pneumonia Detection	5	3 months
Health	Lung Cancer detection using ANN Algorithm	5	6 months
Health	Liver Disease Prediction using ML	5	6 months
Health	Blood Donation system network using DBMS and ML	6	4 months
Health	Blood bank management system	6	3 months