

# IIT Mandi iHub and HCI Foundation\*

Technology in harmony with human needs

## Domain Area: Human-Computer Interaction (HCI)



\*Part of the Technology Innovation Hub (TIH)  
National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)

# PMKVY 4.0



4.0

Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is the flagship scheme of the Ministry of skill development & Entrepreneurship (MSDE) implemented by the national skill development corporation. The objective of this skill certification scheme is to enable a large number of Indian youth to take up industry-relevant skill training that will help them in securing a better livelihood.

# HPKVN



HPKVN is a skill development corporation in the state of Himachal Pradesh.

HPKVN is responsible for implementing various skill development programs and initiatives to enhance the employability and skill levels of the youth in the state.

HPKVN collaborates with industries to identify their skill requirements and develop training programs accordingly.

# Courses Available



## Kisan Drone Operator

10th Class Pass with 2 years of relevant experience  
OR

10th Class Pass + ITI (1 year after Class 10th) with 1 year of relevant experience

OR

10th Class Pass + ITI (2 years after Class 10th)

OR

10th Class Pass and pursuing regular schooling

Age: 18

Sector: Agriculture/Agriculture crop production

The outcome of the Program:

1. Certificate from NSDC (National Skill Development and Corporation) & IIT Mandi iHUB and HCI Foundation
2. Job Assistance/ Self Employment Assistance



# Kisan Drone Operator

## Benefits of the Program:

1. Soil and Field Analysis
2. Crop Monitoring
3. Livestock Management
4. Spraying Fertilizers

1. Increase in farm production & yield
2. 99% accuracy level in crop & field data
3. Quick decision-making for farmers almost 3x

**Module 1: Introduction to the role of Kisan Drone Operator**

**Module 2: Rules and regulations related to drone operation**

**Module 3: Basic drone operation dynamics and principles**

**Module 4: ATC procedures & Radiotelephony (non-FRTOL)**

**Module 5: Operation of Fixed-wing, Rotorcraft & Hybrid UAVs**

**Module 6: Role of Weather and Meteorology in drone operations**

**Module 7: Basic Maintenance of drone equipment**

**Module 8: Analysis and Assessment of Risk**

**Module 9: Carryout installation and utilization of Payload**

**Module 10: Data Analysis and report preparation**

**Module 11: Carryout Flight Simulator Training & Practice Flying**

**Module 12: Application of pesticides and nutrients with drones**

**Module 13: Safety and emergency procedures before and after pesticide spraying through drone operation**

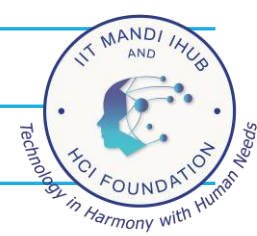
**Module 14: Carrying out multispectral mapping for various agriculture and allied activities using drone**

**Module 15: Basic entrepreneurial activities for drone operators**

**Module 16: Hygiene and Cleanliness**

**Module 17: Safety and emergency procedures**

**Module 18: On the Job Training**



# Courses Available



## Telecom Technician- IOT Device/Systems

1th-grade pass OR  
Completed 1st year of 3-year diploma (after 10th) and pursuing a regular diploma

OR  
10<sup>th</sup>-grade pass and pursuing continuous schooling

OR  
10th Grade Pass with 2 years relevant experience

OR  
Previous relevant Qualification of NSQF Level 3.0 with minimum education as 5th Grade pass with 2-year relevant experience

Age: 17

Sector: Telecom/Network Managed Services

The outcome of the Program:

1. Certificate from NSDC (National Skill Development and Corporation) & IIT Mandi iHUB and HCI Foundation
2. Job Assistance/ Self Employment Assistance



# Telecom Technician – IOT Device/Systems

## Benefits of Program

IoT Connectivity Services

**Data storage and Management**

**Higher speed and expanded bandwidth**

**Increased power efficiency.**

Module 1:  
Introduction to the  
Role of Telecom  
Technician - IOT  
Device/System

Module 2: Install and  
Configure IOT devices

Module 3: Level 1  
troubleshooting of  
IOT devices

Module 4: Organize  
Work and Resources  
as per Health and  
Safety Standards

Module 5:  
Communication and  
Interpersonal Skills

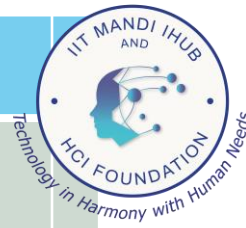
Module 6: On-the-Job  
Training



# Courses Available



## Solar PV-Installer (Suryamitra)



10th pass + ITI (1 year) (Electrical/Electronics/Civil/ Mechanical/  
Fitter/Instrumentation/Welder or any related trade)

OR

Diploma after class 10th (Government recognized 3 years Diploma  
(Electrical/ Mechanical/Civil/Agriculture/ Electronics & Communication /  
Control & Instrumentation or in a related discipline)

OR

12th Pass with Science

OR

10<sup>th</sup>-grade pass and pursuing continuous schooling

OR

10<sup>th</sup> Pass with 2 years of Experience

OR

NSQF level 3 certified in a relevant job role with 2 years of relevant  
experience

Age : 16

Sector: Green Job/Renewable Energy

The outcome of the Program:

1. Certificate from NSDC (National Skill Development and Corporation) & IIT Mandi iHUB and HCI Foundation
2. Job Assistance/ Self Employment Assistance





# Solar PV-Installer Suryamitra

## Benefits of the Program:

1. Specialized skills in solar PV system installation, operation, and maintenance
2. job opportunities in the solar energy sector.
3. start their own solar PV installation and maintenance businesses
4. Government Recognition certification
5. Industry-Relevant Training

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**Module 1: Introduction to Solar PV installer course**

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**Module 2: Basics of Solar Energy and Electrical Concepts**

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**Module 3: Basics of Solar Photovoltaic System and its Components**

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**Module 4: Identification and Use of different tools and tackles used for installation of solar pv system**

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**Module 5: Site Survey for Installation of Solar PV System and asses the customer's Solar PV Requirement**

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**Module 6: Interpretation of Drawings, Material Handling and storage of components on - site**

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**Module 7: Installation of Electrical Components of a Solar PV System**

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**Module 8: Test and Commission Solar PV system**

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**Module 9: Maintain Solar Photovoltaic Power System**

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**Module 10: Maintain Personal Health & Safety at the project site**

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**Module 11: Completion and Handover Documentation**

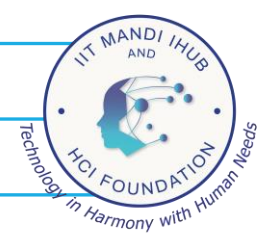
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**Module 12: Employability Skill**

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**Module 13: On the Job Training**

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## Kisan Drone Operator

1. Can be a drone expert.
2. Self-employment.
3. Entrepreneur and Freelancing opportunity
4. Many companies deal in pesticide spray.
5. Like an ATC controller, you can be Drone Controller

## Telecom Technician- IOT Device/Systems

1. Agriculture Sector
2. Health Sector
3. Smart home/city/office
4. Traffic Management
5. Banking Sector
6. Surveillance and Security

## Solar PV Installer

1. Rising Demand for Solar Energy
2. Job Opportunities
3. Solar Industry's rapid growth
4. Start own businesses
5. International Opportunities
6. Continuous Industry Innovation