Agrivoltaics and Solar Farming Systems Training Course

Professional Development Training Course Outline

Category	Renewable Energy	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Agrivoltaics and Solar Farming Systems represent a transformative approach to sustainable agriculture, renewable energy integration, and climate-smart farming solutions. By combining solar photovoltaic (PV) technology with agricultural practices, this innovative model optimizes land use efficiency while simultaneously generating clean energy and enhancing crop productivity. As global demand rises for food security, carbon neutrality, and green energy solutions, agrivoltaics is rapidly emerging as a key driver in the renewable energy transition and sustainable land management systems.

Agrivoltaics and Solar Farming Systems Training Course is designed to equip participants with practical and technical expertise in solar farming design, agrivoltaic system implementation, smart irrigation, and sustainable agricultural innovation. Through a combination of hands-on learning, real-world case studies, and advanced digital tools, learners will gain insights into integrating precision agriculture, climate resilience strategies, and solar energy systems. The program emphasizes future-ready skills, green entrepreneurship, and scalable agritech solutions, preparing participants to lead in the evolving clean energy and agriculture sectors.

Programme Curriculum

Agrivoltaics and Solar Farming Systems Training Course

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Course Duration

5 days

Course Objectives

1. Understand agrivoltaics systems and renewable energy integration
2. Develop skills in solar farm design and layout optimization
3. Apply climate-smart agriculture techniques
4. Analyze energy efficiency and carbon footprint reduction strategies
5. Implement precision agriculture and smart irrigation systems
6. Evaluate financial models and ROI in solar farming
7. Explore sustainable land-use management practices
8. Integrate IoT, AI, and data-driven farming solutions
9. Enhance knowledge of solar PV installation and maintenance
10. Assess policy frameworks and green energy regulations
11. Promote food-energy-water nexus sustainability
12. Develop agribusiness and green entrepreneurship models
13. Strengthen climate resilience and adaptation strategies

Target Audience

1. Farmers and **agri-entrepreneurs**
2. Renewable energy professionals
3. Agricultural engineers and consultants
4. Sustainability and climate change practitioners
5. Government and policy makers
6. Students in agriculture, energy, and environmental sciences
7. NGOs and development organizations
8. Investors in **green technology and sustainable infrastructure**

Course Modules

Module 1: Introduction to Agrivoltaics

- Concept and evolution of agrivoltaics
- Benefits of dual land use systems
- Global trends in solar farming
- Key technologies and components
- Case Study: Agrivoltaics adoption in Germany

Module 2: Solar Energy Fundamentals

- Basics of solar radiation and PV systems
- Types of solar panels
- Energy generation principles
- System components and configurations
- Case Study: Utility-scale solar farms

Module 3: Agrivoltaic System Design

- Site selection and land assessment
- Panel spacing and crop compatibility
- Structural design considerations
- Shading analysis techniques
- Case Study: Japan’s agrivoltaic farms

Module 4: Sustainable Agriculture Practices

- Soil health and crop management
- Organic farming integration
- Water conservation techniques
- Biodiversity enhancement
- Case Study: Sustainable farming in India

Module 5: Smart Irrigation Systems

- Drip and precision irrigation
- IoT-based water management
- Sensors and automation
- Water-use efficiency strategies
- Case Study: Smart irrigation in Israel

Module 6: Climate-Smart Farming

- Climate adaptation strategies
- Risk management in agriculture
- Carbon sequestration practices
- Weather data utilization
- Case Study: Climate-resilient farms in Africa

Module 7: Solar Farm Installation

- Installation procedures
- Safety standards and compliance
- Equipment handling
- Workforce planning
- Case Study: Large-scale solar installation projects

Module 8: Operations and Maintenance

- Monitoring and performance tracking
- Preventive maintenance strategies
- Fault detection systems
- Lifecycle management

- Case Study: O&M best practices in solar farms

Training Methodology

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

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