The Science of Climate Change Training Course

Professional Development Training Course Outline

Category	Environmental Management and Conservation	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Climate change is the defining challenge of our era, with profound implications for every aspect of human society and the natural world. The Science of Climate Change Training Course is designed to equip professionals, policymakers, and advocates with a foundational understanding of the underlying scientific principles, and the urgency of our collective response. We delve into the complex systems of the Earth's climate, from greenhouse gas emissions and their atmospheric effects to the cascading impacts on ecosystems, economies, and human health. By focusing on **climate literacy**, **data-driven insights**, and **evidence-based solutions**, this program goes beyond abstract concepts to provide practical knowledge for navigating the **climate crisis** and building **climate resilience**.

This course is a critical investment in **environmental sustainability** and **corporate governance**, offering participants the tools to drive meaningful **climate action** within their organizations and communities. We explore cutting-edge topics such as **carbon capture technology**, **renewable energy systems**, and **climate adaptation strategies**. Through a blend of theoretical knowledge and real-world case studies, we provide a holistic perspective on both the challenges and the immense opportunities that arise from the global transition to a **low-carbon economy**. Our goal is to empower a new generation of climate-conscious leaders who can not only understand the science but also translate that knowledge into tangible, impactful change.

Programme Curriculum

The Science of Climate Change Training Course

Introduction

Climate change is the defining challenge of our era, with profound implications for every aspect of human society and the natural world. The Science of Climate Change Training Course is designed to equip professionals, policymakers, and advocates with a foundational understanding of the underlying scientific principles, and the urgency of our collective response. We delve into the complex systems of the Earth's climate, from greenhouse gas emissions and their atmospheric effects to the cascading impacts on ecosystems, economies, and human health. By focusing on **climate literacy**, **data-driven insights**, and **evidence-based solutions**, this program goes beyond abstract concepts to provide practical knowledge for navigating the **climate crisis** and building **climate resilience**.

This course is a critical investment in **environmental sustainability** and **corporate governance**, offering participants the tools to drive meaningful **climate action** within their organizations and communities. We explore cutting-edge topics such as **carbon capture technology**, **renewable energy systems**, and **climate adaptation strategies**. Through a blend of theoretical knowledge and real-world case studies, we provide a holistic perspective on both the challenges and the immense opportunities that arise from the global transition to a **low-carbon economy**. Our goal is to empower a new generation of climate-conscious leaders who can not only understand the science but also translate that knowledge into tangible, impactful change.

Course Duration

5 days

Course Objectives

1. Understand the **greenhouse effect**, the **carbon cycle**, and the physical and chemical processes driving **global warming**.
2. Analyze and evaluate various **emissions reduction** and **carbon neutrality** strategies.
3. Explore effective **climate resilience** and **adaptation planning** techniques for different sectors.
4. Comprehend key international frameworks like the **Paris Agreement** and **Nationally Determined Contributions (NDCs)**.
5. Identify and assess **climate risks** (physical and transitional) for businesses and public sector operations.
6. Gain insight into the economic and technological drivers of the global shift to **clean energy**.
7. Learn how circularity principles can contribute to **sustainable development** and reduce waste.
8. Understand the mechanisms of **carbon trading**, **climate finance**, and green investment.
9. Interpret **climate models** and use **environmental data** for informed decision-making.
10. Explore **climate-smart agriculture** techniques and their role in food security.
11. Examine the disproportionate impacts of climate change on vulnerable populations and the principles of **climate justice**.
12. Develop **ESG (Environmental, Social, and Governance)** and **CSR (Corporate Social Responsibility)** policies that align with climate goals.
13. Learn to communicate complex climate science to diverse audiences and counter **climate misinformation**.

Organizational Benefits

- Proactively identify and manage climate-related risks to operations, supply chains, and assets.
- Demonstrate a commitment to sustainability, attracting socially conscious customers, investors, and talent.
- Stay ahead of evolving **climate change policy** and environmental regulations.
- Unlock opportunities in the **green economy** and develop new low-carbon products and services.
- Implement strategies for **energy efficiency** and waste reduction, leading to cost savings.

- Foster a culture of **environmental stewardship** and empower employees to contribute to corporate sustainability goals.

Target Audience

1. Corporate Professionals.
2. Government and Public Sector.
3. Financial Services.
4. Engineers and Technologists.
5. Educators and Researchers.
6. Journalists and Communicators.
7. Non-profit and Advocacy Leaders.
8. Supply Chain and Operations Managers.

Course Modules

Module 1: The Foundations of Climate Science

- The Greenhouse Effect
- Earth's Energy Balance: The science of how the planet absorbs and radiates heat.
- Historical Climate Data.
- Intergovernmental Panel on Climate Change (IPCC).
- **Case Study:** The disappearing glaciers of the Arctic and Antarctic and their impact on global sea levels.

Module 2: Impacts and Vulnerability

- Extreme Weather Events.
- Ecosystem Impacts.
- Socio-Economic Consequences.
- Climate Vulnerability Assessment.
- **Case Study:** The impact of wildfires in Australia and California on communities and ecosystems.

Module 3: Climate Mitigation: Reducing Emissions

- Global Carbon Budget.
- Decarbonization Pathways.
- Renewable Energy Solutions.
- Carbon Capture, Utilization, and Storage (CCUS).
- **Case Study:** Germany's "Energiewende" and its ambitious transition to renewable energy.

Module 4: Climate Adaptation: Building Resilience

- Adaptation vs. Mitigation: Distinguishing between and integrating both approaches.
- Infrastructure Resilience: Hardening critical infrastructure against climate impacts.
- Nature-Based Solutions.
- Early Warning Systems.
- **Case Study:** The Netherlands' flood management systems and their integration of adaptation and engineering.

Module 5: Climate Policy and Governance

- The UN Framework Convention on Climate Change (UNFCCC).

- Paris Agreement and COP Summits.
- National and Local Policy.
- Corporate Climate Governance.
- **Case Study:** The European Union's Green Deal and its cross-sectoral approach to climate policy.

Module 6: Sustainable Finance and Green Investment

- The Role of Finance: How financial institutions can drive the green transition.
- Climate-Related Financial Disclosures
- Green Bonds and Sustainable Investing.
- Carbon Markets: A deeper look at cap-and-trade systems and their effectiveness.
- **Case Study:** The growth of climate-focused ETFs and their performance in the market.

Module 7: Technology and Innovation

- ClimateTech.
- Artificial Intelligence (AI) and Big Data.
- Circular Economy Innovations.
- Sustainable Infrastructure.
- **Case Study:** The development of sustainable packaging materials and their impact on corporate supply chains.

Module 8: Communicating Climate Science and Action

- Scientific Consensus.
- Narrative and Storytelling.
- Addressing Misinformation.
- Personal and Organizational Action
- **Case Study:** The global youth climate movement and its role in raising public awareness and holding leaders accountable.

Training Methodology

This course employs a blended, interactive learning methodology to ensure maximum engagement and knowledge retention.

- Expert-Led Presentations.
- Interactive Case Studies.
- Practical Workshops.
- Peer-to-Peer Learning.
- Resource Library.
- Quizzes and Assessments.

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
21 Sep 2026	25 Sep 2026	Online	$1,000
21 Sep 2026	25 Sep 2026	Physical	$1,500
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0

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

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com