

The Specialty Coffee Association (SCA) Coffee Sustainability Program Coffee & Climate Course Outline

Venue Requirements

As this is an online course, all students are expected to have access to a stable, high-speed internet connection in a distraction-free environment. Please avoid background noise (e.g., from a roastery, café, or other) when joining the course. Headsets are also recommended to ensure audio clarity. Students should further prevent outside interruptions, such as from pets or household activities.

Course Hours

This is a 16-hour course delivered in eight 2-hour live, online class sessions. The time to prepare for and take the exam is outside of this 16-hour window.

Course Preparation

Students are expected to treat each class session as a "live course" and should be prepared to take notes in the manner that is best for them. Students should arrive at least 5 minutes before the start of the first class session, and at least 2 minutes before the start of the remaining class sessions. Finally, students should prepare their coffee or take their bathroom breaks before the start of each class session. There will be a 5-minute break midway through each class.

Course Description

The Climate & Coffee course of the SCA Coffee Sustainability Program equips coffee professionals with the tools to understand and address climate challenges across the value stream. Through 16 hours of interactive learning, students explore how shifting weather patterns, water scarcity, deforestation, and biodiversity loss threaten coffee production and livelihoods. The course additionally helps students build a strong awareness of climate science, greenhouse gas (GHG) emissions, and the distinctions between climate adaptation and mitigation.

Specifically, students will learn how climate-smart agriculture (CSA) practices—such as water management, agroforestry, and climate-resilient crops—can strengthen farm resilience. They'll also gain hands-on experience with carbon footprint measurement, life cycle assessments, and circular economy strategies that promote waste reduction and resource recovery. Finally, by leveraging case studies and real-world examples, the course highlights the relationship between climate action and environmental legislation, including due diligence and sustainability reporting requirements. Overall, upon completing this course, students will:

- Understand the coffee sector's impact on the environment, as well as how broader environmental shifts impact the coffee sector.
- Explore key considerations for increasing climate-resilience at the farm level and beyond.

- Become equipped with the tools and knowledge to take meaningful climate action that is context-specific.

Exam Format

Students will have 37 minutes to complete the exam, unless otherwise discussed between them and their trainer. The exam is available in English, Spanish, Chinese (Traditional and Simplified) and Korean. To pass the exam, students must answer 70% of the questions correctly. There will be 35 questions in total, which will be a mixture of true or false and multiple choice. Upon receiving a passing score, students will receive a Climate & Coffee certificate from SCA.

Topics Covered

Session 1

- Recap of climate change in the coffee sector from the Foundation course
- Introduction to core climate change principles, including adaptation and mitigation
- Exploration of how climate change impacts coffee production and the environment overall, including a focus on negative feedback loops
- Additional environmental challenges across the coffee value stream
- The relevance of climate-smart agriculture (CSA) practices

Session 2

- Innovative research and plant breeding for climate adaptation
- Discussion on how these innovations contribute to resilient coffee systems
- Discussion on water management and watershed challenges in the coffee sector, and their impact on production
- Exploration of the role of agroforestry and biodiversity management in maintaining healthy ecosystems and forests
- Analysis of the interconnections between natural resources and coffee sustainability

Session 3

- Introduction to carbon footprinting in the coffee sector, including definitions and use cases
- Exploration of the Greenhouse Gas Protocol (GHGP) and the concept of emission scopes
- Discussion on measurement methodologies and challenges in the coffee sector

Session 4

- Deep dive into emissions accounting, including an activity whereby students gather data and use this data to understand emission factors
- Student practice surrounding basic emissions calculations and conversion to CO₂ equivalents
- Review of the challenges when accurately attempting to measure emissions from coffee

Session 5

- Introduction to life cycle assessments and their interaction with carbon accounting
- Exploration of carbon reduction strategies, including insetting and offsetting
- Discussion on how to achieve net-zero targets through integrated approaches

Session 6

- Examination of circular economy principles and the shift from linear to circular production models in coffee
- Discussion on waste reduction strategies and trade-offs for maximizing resource efficiency

Session 7

- Review of best practices for environmental due diligence and sustainability reporting
- Discussion on greenwashing and transparency in sustainability claims

Session 8

- Analysis of the interaction between social equity, economic resilience, and environmental sustainability in the coffee sector
- Review of real-world case studies demonstrating successful climate-focused sustainability initiatives
- Final reflection on key takeaways and discussion on next steps, including exam preparation