

Grapes and Health — Online Module (Week 1): Session Distribution

Daily overview

Date	Daily theme	Lecture (min)	Active/ Chall. (min)	Sync. total (min)	Async. (min)
21-cent-26	Day 1 – Introduction and phytochemical composition of the grape	80	0	70	60
22-cent-26	Day 2 – Polyphenols, flavonoids, tannins and resveratrol	80	0	70	90
23-cent-26	Day 3 – Health effects and scientific evidence	80	45	115	45
24-cent-26	Day 4 – Molecular mechanisms and bioavailability	80	0	70	60
25-cent-26	Day 5 – Industrial applications and challenge preparation	90	45	120	45
TOTAL		410	90	445	300

2. Detailed session distribution

Date	Time	Session / Content	Format	Teacher	Lecture (min)	Active/ Chall. (min)	Sync. total (min)	Async. (min)
Day 1 – Introduction and phytochemical composition of the grape · 21/09/2026								
21-cent-26	15:00–15:30	Welcome and course presentation: objectives, methodology, assessment, and presentation of the stakeholder's challenge	Synchronous	EPL	30		30	
21-cent-26	15:30–16:30	The grape and its derivatives: anatomy of the bunch, must, skin, seed and pomace. Overview of the wine sector	Synchronous	SK	20		20	
21-cent-26	16:30–16:45	Break	Break					
21-cent-26	16:45–17:45	General phytochemical composition: macro/micronutrients and families of bioactive compounds	Synchronous	JF	20		20	
21-cent-26	after session	Guided asynchronous activity: introductory reading on grape bioactive compounds. Self-assessment quiz	Asynchronous	EPL	10			60
Day subtotal					80	0	70	60
Day 2 – Polyphenols, flavonoids, tannins and resveratrol · 22/09/2026								
22-cent-26	15:00–16:00	Polyphenols I: structure, classification and location in the grape	Synchronous	DG	30		30	
22-cent-26	16:00–16:15	Break	Break					
22-cent-26	16:15–17:15	Polyphenols II: flavonoids and tannins. Organoleptic and functional properties	Synchronous	ML	20		20	
22-cent-26	17:15–17:45	Resveratrol and stilbenes. Myths and evidence	Synchronous	JF	20		20	
22-cent-26	after session	Asynchronous activity: selected readings + video. Quiz. Preparation of a fact sheet per compound	Asynchronous	EPL	10			90
Day subtotal					80	0	70	90

Day 3 – Health effects and scientific evidence · 23/09/2026

23-cent-26	15:00–16:00	Effects on the cardiovascular and neurological systems.	Synchronous	PV	35		35	
23-cent-26	16:00–16:15	Break	Break					
23-cent-26	16:15–17:15	Effects on the digestive and immune systems. Microbiota and polyphenols	Synchronous	EPL	35		35	
23-cent-26	17:15–18:00	Online debate: what does the evidence really say? Critical reading of studies	Synchronous	EPL		45	45	
23-cent-26	after session	Asynchronous activity: each student selects a scientific article for critical appraisal	Asynchronous	EPL	10			45
Day subtotal					80	45	115	45

Day 4 – Molecular mechanisms and bioavailability · 24/09/2026

24-cent-26	15:00–16:00	Molecular mechanisms of action: antioxidant, anti-inflammatory and cell-signaling activities	Synchronous	PV	25		25	
24-cent-26	16:00–16:15	Break	Break					
24-cent-26	16:15–17:15	Bioavailability and bioactivity: absorption, metabolism and conditioning factors	Synchronous	PV	25		25	
24-cent-26	17:15–17:45	Impact of agronomic practices and industrial processing on the stability of the bioactives	Synchronous	SK	20		20	
24-cent-26	after session	Asynchronous activity: video + reading. Integrative quiz on mechanisms and bioavailability	Asynchronous	EPL	10			60
Day subtotal					80	0	70	60

Day 5 – Industrial applications and challenge preparation · 25/09/2026

25-cent-26	15:00–15:45	Applications in nutrition: functional food and nutraceuticals. Market cases	Synchronous	DG	20		20	
25-cent-26	15:45–16:30	Applications in pharmacy and cosmetics: grape bioactives in formulations. Market cases	Synchronous	ML	20		20	
25-cent-26	16:30–16:45	Break	Break					
25-cent-26	16:45–17:30	Circular economy: valorization of pomace and grape by-products	Synchronous	JF	20		20	
25-cent-26	17:30–18:30	Presentation of the stakeholder's challenge and formation of groups. Work rules and deliverables for the on-site week	Synchronous	EPL	20		60	
25-cent-26	after session	Asynchronous activity: final quiz of the online module	Asynchronous	EPL	10			45
Day subtotal					90	0	120	45
WEEK TOTAL					410	45	445	300