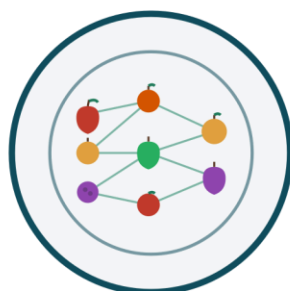


UNIVERSITY OF THE AEGEAN
Department of Food Science & Nutrition



Transforming Nutrition with Artificial Intelligence

ERASMUS+ BIP · LEMNOS 2026

Programme Agenda

DATES	LOCATION	CREDITS	LANGUAGE
28 Sep – 2 Oct 2026	Lemnos, Greece	3 ECTS	English

DAY 1 Foundations of dietary assessment and the role of AI

TIME	SESSION
09:00 – 10:30	Session 1 ▪ Programme introduction, learning objectives, and BIP structure ▪ Overview of dietary assessment methods: 24h recalls, FFQs, food diaries, biomarkers — strengths and limitations
10:30 – 10:45	<i>Coffee break</i>
10:45 – 12:15	Session 2 ▪ Measurement error, bias, and misreporting ▪ Challenges in accurately measuring dietary intake
12:15 – 13:15	<i>Lunch break</i>
13:15 – 14:45	Session 3 ▪ Introduction to AI concepts for non-specialists ▪ Mapping AI methods to dietary assessment challenges ▪ Case studies: where AI improves dietary assessment (real-world examples)
14:45 – 15:00	<i>Coffee break</i>
15:00 – 17:00	Session 4 ▪ Introduction to programming with Python

DAY 2 AI tools for dietary assessment

TIME	SESSION
09:00 – 10:30	Session 1 ▪ Image-based dietary assessment: food recognition, segmentation, portion estimation
10:30 – 10:45	<i>Coffee break</i>
10:45 – 12:15	Session 2 ▪ NLP & LLM-based dietary assessment: food diary parsing, recipe analysis, text-to-nutrient pipelines
12:15 – 13:15	<i>Lunch break</i>
13:15 – 14:45	Session 3 ▪ Sensor-based & wearable approaches: passive intake detection, eating episodes, limitations ▪ Comparison of methods: validity, feasibility, scalability
14:45 – 15:00	<i>Coffee break</i>
15:00 – 17:00	Session 4 ▪ Introduction to group project themes: improving accuracy, reducing bias, designing AI-assisted tools ▪ Formation of international interdisciplinary groups ▪ Initial project scoping and mentoring ▪ Kickoff of group projects (hands-on)

DAY 3 Hands-on applications: from data to dietary intake

TIME	SESSION
09:00 – 10:00	Session 1 ▪ Hands-on: text-based dietary assessment using LLMs
10:00 – 11:00	Session 2 ▪ Hands-on: image-based analysis workflows (annotation → classification → estimation)
11:00 – 11:15	<i>Coffee break</i>
11:15 – 12:15	Session 3 ▪ Hands-on: integrating multiple data sources (text + image + context)
12:15 – 13:15	<i>Lunch break</i>
13:15 – 14:45	Session 4 ▪ Introduction to simple ML approaches for estimating intake, handling missing data, identifying misreporting ▪ Strengths and limitations of automated pipelines
14:45 – 15:00	<i>Coffee break</i>
15:00 – 17:00	Session 5 ▪ Guided group project development

DAY 4 From dietary assessment to decision making

TIME	SESSION
09:00 – 10:30	Session 1 ▪ Translating dietary data into diet quality indices, nutrient adequacy, and food environment metrics ▪ AI-supported interpretation of dietary data
10:30 – 11:15	Session 2 · Part 1 ▪ Personalised nutrition
11:15 – 11:30	<i>Coffee break</i>
11:30 – 12:15	Session 2 · Part 2 ▪ Behaviour change and nudge strategies
12:15 – 13:15	<i>Lunch break</i>
13:15 – 14:45	Session 3 ▪ Ethics, bias, transparency, and GDPR in dietary data & AI ▪ Critical appraisal of AI-based dietary assessment tools
14:45 – 15:00	<i>Coffee break</i>
15:00 – 17:00	Session 4 ▪ Advanced project work with structured feedback

DAY 5 Integration, presentations and future directions

TIME	SESSION
09:00 – 10:30	Session 1 ▪ Future directions in dietary assessment: passive monitoring, multimodal AI, real-time feedback
10:30 – 10:45	<i>Coffee break</i>
10:45 – 12:45	Session 2 ▪ Final group project presentations ▪ Discussion and peer feedback
12:45 – 13:45	<i>Lunch break</i>
13:45 – 15:15	Session 3 ▪ Individual reflection ▪ Group discussion: what worked well and limitations ▪ Real-world implementation
15:15 – 15:30	<i>Coffee break</i>
15:30 – 16:30	Session 4 ▪ Programme evaluation ▪ Closing remarks