Course for Ph.D. students
41th cycle (Nov 2025 – Oct 2028)

Titles:
Multilevel analysis of food structures: theoretical and practical course (1 ECTS)

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Professor at the University of Parma

Course language: **English**

Period: II semester

📅 03/07/2026
🕒 9 a.m. – 6 p.m.
📍 Room G – Pharmacy Building

To attend the course please contact:
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Course description

Understanding **food structure** is essential for **designing products with tailored physical properties,** such as viscosity and physical stability during processing and shelf life. Emulsions and suspensions—complex colloidal systems found in everyday foods like milk, plant-based beverages, and salad dressings—are central to many food formulations. Studying these systems allows food scientists to **control their colloidal properties, quality**, and to develop innovative products that meet both consumer expectations and industry needs.
This course offers a **theoretical and hands-on** introduction to the multilevel analysis of food structures, with a specific focus on **particle size and rheological characterization** of colloidal systems, including **suspensions** and **emulsions.** Students will learn to prepare these systems, analyze their structural properties and understand the relation between the particle size and the rheological properties of the systems. Emphasis is placed on understanding colloidal stability, dispersion techniques, and the ways in which structural parameters influence texture, appearance, and shelf life.

Evaluation: YES, oral presentation on case study