

IDENTIFICATION

Course code : ESI-SPI-CI-AG4-S8-UE2-EC8
ECTS : 2.5

DURATION

Lectures : 7
Tutorial classes : 17
Labs : 8
Total : 32

Project :
Personnal work :

ASSESSMENT

Continuous assessment Individual knowledge evaluation Oral presentation of group work

TEACHING MATERIALS

Course and tutorial materials provided

LANGUAGE

English

CONTACT

Cyrielle GARCIA
cyrielle.garcia@univ-reunion.fr

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UE : UE8-R

COURSE : Nutrition and Health

SCOPE OF THE COURSE

OBJECTIVES

Understand and improve knowledge of the links between diet, nutrition, and human health.

COMPETENCE AND SKILLS

Generate an innovative product idea, analyze its environment, and identify a market opportunity Develop a functional specification Design and implement a complex experimental plan Analyze technical and financial feasibility Research resources, synthesize, and present the work in English using appropriate statistical tools

PROGRAM

- Organization of the digestive system, fate of food from ingestion to assimilation.
- Molecular bases and modeling of human digestion : description of digestion, absorption, and metabolism phenomena involved for each nutrient group
- Benefits of prebiotics and probiotics.
- Factors influencing bioavailability, nutritional value of a food. Implications for physiological functions and the concept of nutritional strategy.
- Dynamic mechanisms of postprandial regulation, glycemia, and lipemia.
- Understanding pathologies and health deterioration linked to diet such as type 2 diabetes, obesity, hypercholesterolemia, allergies and food intolerances, sarcopenia.

BIBLIOGRAPHY

REQUIREMENTS

Nutrient needs and intake