Course title	**Brain, Diet and Behaviour**				
Course code	**PSY4805**				
Course type	Elective				
Level	Bachelors				
Year / Semester	Year 4 / 8th Semester				
Teacher's name	Dr Florentia Hadjiefthyvoulou				
ECTS	6	**Lectures / week**		**Laboratories / week**	
Course purpose and objectives	This course investigates the bidirectional relationship between nutrition, brain function, and mental health. Drawing from neuroscience, psychology, and nutritional science, it explores how dietary factors influence brain development, cognitive performance, emotional regulation, and vulnerability to mental health conditions. Students will critically assess mechanisms such as the gut–brain axis, neuroinflammation, and neurotransmitter synthesis, and examine therapeutic dietary approaches, including the ketogenic and Mediterranean diets, in the context of conditions like depression, ADHD, dementia, and epilepsy.				
Learning outcomes	On successful completion of the course and with further independent study, students will be able to: **Knowledge** 1. Demonstrate understanding of how dietary components influence brain structure, function, and mental health. 2. Describe neurobiological mechanisms linking nutrition to cognition, emotion, and behaviour. **Competencies** 3. Critically evaluate empirical research on the relationship between nutrition and neurological/psychiatric conditions. 4. Apply nutritional neuroscience concepts to real-world issues in clinical and public health contexts. **Transferable Skills** 5. Communicate interdisciplinary scientific concepts clearly to academic and non-academic audiences.				

	6. Analyse and critique health claims and popular discourse around "brain foods" and dietary supplements.		
Prerequisites	PSY1101 Foundations of brain, social psychology and individual differences; PSY2301 Biological basis of behaviour	**Required**	none
Course content	**Indicative Content** • The **gut–brain axis:** microbiome and mental health • Brain development and diet across the lifespan • Blood sugar, cognition, and emotional regulation • Nutritional influences on **stress**, **anxiety**, and **depression** • Diet and cognitive performance: attention, memory, and executive function • **The ketogenic diet** and its psychological applications (e.g. epilepsy, cognitive decline, mood regulation) • Nutrition in childhood and cognitive development • Dietary patterns and long-term brain health (e.g. Mediterranean, plant-based, ultra-processed diets) • **Micronutrients and supplementation**: Omega-3, B vitamins, iron, magnesium • Eating behaviours and mental health: orthorexia, food insecurity, disordered eating, food addiction and related treatments • Public health, food marketing, and psychological wellbeing		
Teaching methodology	Teaching will consist of lectures, in-class discussions, case studies and quizzes designed to assess understanding and provide opportunities for formative feedback. Teaching will be supported by online materials and additional readings		
Bibliography	**Core Text:** Cook, A., & Champion, J. (2025). Nutritional Psychology: Understanding the Relationship Between Food and Mental Health (1st ed.). CRC Press. https://doi.org/10.1201/9781032647647 **Further reading:** A reading list will accompany each lecture, highlighting relevant articles accessible through the library, as well as open-access and e-learning resources.		
Assessment	Attendance and participation 10%		

	Podcast	15%
	Article Critique	30%
	Final Exam	45%
Language	English	