COURSE UNIT (MODULE) DESCRIPTION

Course unit (module) title			Code
Anatomy of happiness			
Academic staff		**Core academic unit(s)**	
Coordinator: dr. Giulio Preta		Life Sciences Center Institute of Biochemistry, Saulėtekio al. 7, LT-10257, Vilnius	
Study cycle		**Type of the course unit**	
Bachelor		Elective/Erasmus	
Mode of delivery	**Semester or period when it is delivered**		**Language of instruction**
Contact	Autumn and spring semesters		English
Requisites			
Prerequisites: molecular biology		**Co-requisites (if relevant):**	
Number of ECTS credits allocated	**Student's workload (total)**	**Contact hours**	**Individual work**
5	133	60	73

Purpose of the course unit

The purpose of course is to explain how happiness emerges from molecular and cellular processes and to help learners understand how genes, biochemical pathways, and cellular mechanisms shape emotional well-being. Our happiness is 50% influenced by genetics, 10% by external life circumstances, and 40% by our own actions. This means that when lifestyle habits are unhealthy (poor diet, lack of sleep, chronic stress, smoking, inactivity, or excessive alcohol use), the body experiences biological strain. This strain disrupts the biochemical systems that support stable mood, vitality, and resilience.

Learning outcomes of the course unit	Teaching and learning methods	Assessment methods
Be able to explain the molecular and cellular processes triggered by unhealthy lifestyle habits in different organs	Lectures, interactive learning methods, exercises, and self-analysis of the literature.	Oral presentation, exam
Be able to describe how genes, signaling molecules, and biochemical pathways interact to shape mood and stress resilience.		
Be able to identify key biomarkers and cellular mechanisms linked to inflammation, oxidative stress, metabolic health, and their impacts on well-being.		
Will understand how a healthy lifestyle shapes happiness and emotional resilience. They will apply this knowledge to optimize habits, manage stress, and enhance overall well-being..		

Content	Contact hours							Individual work: time and assignments	
	Lectures	Tutorials	Seminars	Workshops	Laboratory work	Internship	**Contact hours, total**	**Individual work**	**Tasks for individual work**
1. Unhealthy lifestyle habits and cardio-vascular diseases			**6**	**2**	**2**		**10**	**10**	Self-directed learning; learning of topic-related material by analysis of the literature
2. Unhealthy lifestyle habits and liver diseases			**6**	**2**	**2**		**10**	**10**	Self-directed learning; learning of topic-related material by analysis of the literature
3. Unhealthy lifestyle habits and respiratory diseases			**6**	**2**	**2**		**10**	**10**	Self-directed learning; learning of topic-related material by analysis of the online literature
4. Unhealthy lifestyle habits and neurological diseases			**6**	**2**	**2**		**10**	**10**	Self-directed learning; learning of topic-related material by analysis of the online literature
5. Unhealthy lifestyle habits and haematological diseases			**6**	**2**	**2**		**10**	**10**	Self-directed learning; learning of topic-related material by analysis of the online literature
6. Lifestyle Behaviours Contributing to Cancer	**2**		**4**	**2**	**2**		**10**	**10**	Self-directed learning; learning of topic-related material by analysis of the online literature
Preparation for the exam								**13**	
TOTAL	**2**		**34**	**12**	**12**		**60**	**73**	

Assessment strategy	Weight ,%	Deadline	Assessment criteria
Written exam	70	End of course	Written exam containing questions with open answer and multiple choice
Oral presentation	30	Individually set date	Oral presentation (a topic will be decided individually with a student).
Total	100		Mean of the scores of each assessment.

Author (-s)	Publishing year	Title	Issue of a periodical or volume of a publication	Publishing house or web link
Required reading				

William B. Coleman and Gregory J. Tsongalis	2009	Molecular Pathology		https://www.sciencedirect.com/book/edited-volume/9780123744197/molecular-pathologyPathology ScienceDirect https://www.sciencedirect.com/book/edited-volume/9780123744197/molecular-pathology https://www.sciencedirect.com/book/edited-volume/9780123744197/molecular-pathology