PRIEDAS P1.

PROGRAMOS DALYKŲ (MODULIŲ) APRAŠAI

Course unit (module) title			**Code**
Anatomy of Happiness			
Lecturer(s)		**Department(s) where the course unit (module) is delivered**	
Coordinator: Giulio Preta **Other(s):**		Life Sciences Center Institute of Biochemistry, Saulėtekio al. 7, LT-10257, Vilnius	
Study cycle		**Type of the course unit (module)**	
Bachelor, Master		Elective	
Mode of delivery	**Period when the course unit (module) is delivered**		**Language(s) of instruction**
Seminars	1th and 2th semester, autumn/spring		English
Requirements for students			
Prerequisites: Molecular Biology, Biochemistry, Cell Biology.		**Additional requirements (if any):**	
Course (module) volume in credits	**Total student's workload**	**Contact hours**	**Self directed learning**
5	120	60	60
Purpose of the course unit (module): programme competences to be developed			

Main purpose of *Anatomy of Happiness* 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 wellbeing. 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.

Development of subject competences: the students will be able to:

1) Explain the molecular and cellular processes triggered by unhealthy lifestyle habits in different organs
2) Describe how genes, signaling molecules, and biochemical pathways interact to shape mood and stress resilience.
3) Identify key biomarkers and cellular mechanisms linked to inflammation, oxidative stress, metabolic health, and their impacts on wellbeing.

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Learning outcomes of the program	Learning outcomes of the course unit (module)	Teaching and learning methods	Assessment
Knowledge and its application	Students will understand how an healthy lifestyle shape happiness and emotional resilience. They will apply this knowledge to optimize habits, manage stress, and enhance overall well-being.	Lectures, interactive leaning methods, exercises, self-analysis of the literature.	Written exams
Ability to conduct research	Students will be able to identify biological pathways involved in different type of diseases (i.e CVD diseases, cirrhosis, cancer)		
Personal skills	Students will be able to improve and update the acquired knowledge and practical skills continuously, by discussing and sharing opinions with other students.		
Special skills and Social skills	To be able to develop new and original ideas, adopt innovative solutions and application of methods, thinking strategically and presenting own ideas to others in an appropriate way.		

Content: breakdown of the topics	Contact hours							Self-study work: time and assignments	
	Lectures	Tutorials	Seminars	Exercises	Laboratory work	Internship/work	**Contact hours**	**Self-study hours**	**Assignments**
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
Total	**2**		**34**	**12**	**12**		**60**	**60**	

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	Year of publication	Title	Issue of a periodical or volume of a publi-cation	Publishing place and house or web link
Compulsary reading				
William B. Coleman and Gregory J. Tsongalis	2009	Molecular Pathology		Molecular Pathology | ScienceDirect