DESCRIPTION OF COURSE UNIT FOR DOCTORAL STUDIES
AT VILNIUS UNIVERSITY
(Interdisciplinary course)

Scientific Areas, Fields of Science	Medical and Health Sciences (M 000): Medicine (M 001), Public health (M 004) Humanities (H 000): History (H005)			
Faculty, Institute, Department/Clinic	Department of Anatomy, histology, and anthropology Institute of Biomedical sciences Faculty of Medicine			
Course unit title (ECTS credits, hours)	**Mummy studies** 6 credits (160 hours)			
Study method	**Lectures**	**Seminars**	**Consultations**	**Independent study**
Number of ECTS credits	1	1	1	3
Method of the assessment	Oral exams (10 closed questions based on the reading list below). Marks are expressed in numbers from 1 to 10. Exam is passed if 6 out of 10 questions are answered correctly.			

PURPOSE OF THE COURSE UNIT

This interdisciplinary course will discuss the process of mummification, present the most important research on mummies, as well as a brief history of these studies. It will deal with modern technologies of the natural and medical sciences applied to mummy investigations, share some important results in the field of paleopathology, and present the ethical principles of such research. It will also demonstrate how mummy studies contributes to the knowledge of life and customs in the past.

THE MAIN TOPICS OF COURSE UNIT

Mummies are human remains with surviving soft tissues. Mummification can occur due to natural factors (so-called natural mummies), or due to active human intervention (artificial mummies), although many cultures practiced burial rituals that combined natural and artificial mummification. The term 'mummy' itself derives from the Latin word *mumia*, which is the Arabic term *mumiya* for embalmed body. The term took on the meaning of "treating/preserving the body" much later. Due to their unique nature, such remains provide many insights into burial and rituals, and the survival of soft tissues allows for a furthering of knowledge about diseases in the past. Mummy research began only at the beginning of the twentieth century. Until then, most mummies were marketed as oddities or used for pseudo-scientific therapeutic purposes. At the same time, various pathologies found in mummified remains have received considerable attention. The first World Congress of Mummy Studies took place in 1992 in Tenerife, Canary Islands. Several hundred scientists then shared nearly a century of research experience and revealed a wide range of potential for scientific interests, including the integration of biomedical and bioarchaeological data. The most current research on mummies focuses on the development and application of non-destructive (radiography, computed tomography with advanced three-dimensional imaging, endoscopy) as well as minimally destructive (chemical, physical, and biological) methods. The course will present personal research experience on: Egyptian mummies, bog bodies, anatomical preparations, relics of saints, and the famous "Iceman" (Ötzi).

Particular attention will be paid to those found in Lithuania (Church of the Holy Spirit (Dominican), Vilnius, Holy Trinity Church, Vilnius, St. Michael's Church, Vilnius, Evangelical Reformed Church, Kėdainiai, St. Apostles Peter and Paul Cathedral, Varniai), as well as the mummies curated in the collections of the MK Čiurlionis National Museum of Art and the Lithuanian National Museum.

RECOMMENDED LITERATURE SOURCES

1. Aufderheide, A.C., 2003. The scientific study of mummies. CUP, Cambridge.
2. David, A.E. 2008. Conservation treatment for mummies. In: David, R.A. (ed.) Egyptian mummies and modern science. CUP, Cambridge: 247-254.
3. Lynnerup, N., 2007. Mummies. Yearbook of Physical Anthropology, 45 (Supplement): 162-190.
4. Nystrom, K., 2018. The bioarchaeology of mummies. Routledge, London.
5. Piombino-Mascali, D., Gill-Frerking, H. 2019. The mummy autopsy: some ethical considerations. In: Squires, K., Errickson, D., Márquez-Grant, N. (eds.) Ethical approaches to human remains: a global challenge in bioarchaeology and forensic anthropology. Springer, Cham: 605-625.
6. Samadelli, M., et al., 2013. Theoretical aspects of physical-chemical parameters for the correct conservation of mummies on display in museums and preserved in storage rooms. Journal of Cultural Heritage 14: 480-484.
7. Samadelli, M., et al., 2019. Development of passive controlled atmosphere display cases for the conservation of cultural assets. Journal of Cultural Heritage 35: 145-153.
8. Stienne, A., 2022. Mummified. MUP, Manchester.
9. Waldron, T., 2020. Palaeopathology. 2nd edition. CUP, Cambridge.
10. Zimmerman, M.R., 2012. The analysis and interpretation of mummified remains. In: Grauer, A. (ed.) A companion to paleopathology. Blackwell, Oxford: 162-169.

CONSULTING LECTURERS

1. Coordinating lecturer: Dario Piombino-Mascali (Dr.)
2. Rimantas Jankauskas (Prof. dr. HP)

APPROVED:

By Council of Doctoral School of Medicine and Health Sciences at Vilnius University 15th of June, 2022

Chairperson of the Board: Prof. Janina Tutkuvienė