

COURSE SYLLABUS FOR DOCTORAL STUDIES

Name of the course	Field of study and its code	Faculty
Digitization Technologies	Communication and information S 008	Communication

Study method	Number of credits ECTS	Study method	Number of credits ECTS
Lectures		Consultations	2 ECTS
Individual work	5 ECTS	Seminars	

<p>Course abstract</p> <p>The aim of the subject is to analyze the aspects of application and use of digital technologies in the fields of the research of the heritage, social sciences, and the humanities; to relate the application-directed knowledge with the broader theoretical and cultural contexts. Doctoral students are encouraged to apply innovative methods based on digital technologies in their doctoral research.</p> <p>Content of the subject</p> <p>The history and trends of the development of digital technologies. Explication of the significance of digital technologies and their relationship with other forms/manifestations of media and technologies. Theoretical contexts of the application of digital technologies in the humanities and social sciences; the scope and objectives of the application of digital technologies. The impact of digital technologies The impact of digital technologies on HSM paradigms and their objectives. The technologies, hardware and software of registering, accrual and non-invasive research of the sources of empirical data (internet data semi-automatic accumulation technologies, infrared and ultraviolet photography, application of X-rays, GeoRadar, 3-D scanning, tacheometry, 360-degree photography, ultrafast cameras, etc.). Megadata. Application of crowdsourcing for the accumulation of data.</p> <p>Specific aspects of the storage of data of the humanities and social sciences in the digital environment. Issues of data structuration, standardization, recoding, interpretation, historical geography, chronology and storage of personal data in the digital environment. Metadata and paradata. Means of data storage in the digital environment (information systems, search engines and their networks). Development of digital collections, their management and information services. Archiving and storage in digital libraries and digital storage facilities. Management of digital information and the rights of intellectual property. Standards for digital archiving, the formats in use and general requirements. Methods of assessment of the quality of digital storage facilities. Data saving, copying and conversion.</p> <p>Digital means, methods and software applications of data research in the fields of the humanities and social sciences (view and sound filtering, 3-D data analysis, quantitative analysis of the content, mathematical statistics, data modeling, etc.). Megadata analysis. Application of artificial intelligence in the research of the humanities and social sciences.</p> <p>Experience of running and implementing digitization projects in Lithuania and worldwide. The fundamentals, key principles and trends in the projects on work digitization.</p> <p>Study methods:</p> <ol style="list-style-type: none"> 1. Individual consultations with the lecturers supervising the subject. 2. Individual research of academic literature and the preparation of an academic paper. The doctoral student selects the topic of the academic paper and bases its topic on the questions outlined by the Professor supervising the subject and the scientific advisor of the thesis.
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Methods of assessment:

1. Academic paper (from 30 000 to 40 000 symbols including spaces) covering the connection between the topic and the thematic area of the student's doctoral thesis focusing on the questions posed by the Professor supervising the subject and the scientific advisor of the thesis.
2. Academic discussion on the basis of the academic paper of the student during the exam.

Course literature

Drucker, J. (2021). *The digital humanities coursebook: An introduction to digital methods for research and scholarship*. Routledge.

Foster, I., Ghani, R., Jarmin, R. S., Kreuter, F., & Lane, J. (2020). *Big data and social science: Data science methods and tools for research and practice*. Chapman and Hall/CRC.

Hanneman, R. A., Kposowa, A. J., & Riddle, M. D. (2012). *Basic statistics for social research*. Wiley.

Ignatow, G., & Mihalcea, R. (2017). *Text mining: A guidebook for the social sciences*. SAGE Publications. <https://doi.org/10.4135/9781483399782>

Quinton, S., & Reynolds, N. (2018). *Understanding research in the digital age*. SAGE Publications. <https://doi.org/10.4135/9781529716573>

Roberts, S., Snee, H., Hine, C., Morey, Y., & Watson, H. (Red.). (2016). *Digital methods for social science: An interdisciplinary guide to research innovation*. Palgrave Macmillan.

Robila, M., & Robila, S. A. (2020). Applications of artificial intelligence methodologies to behavioral and social sciences. *Journal of Child and Family Studies*, 29, 2954–2966. <https://doi.org/10.1007/s10826-019-01689-x>

Rogers, R. (2019). *Doing digital methods*. SAGE Publications.

Snee, H., Hine, C., Morey, Y., Roberts, S., & Watson, H. (2016). *Digital methods for social science: An interdisciplinary guide to research innovation*. Palgrave Macmillan.

Name of consulting lecturer	Academic rank	Major works published in the last 5 years
Arūnas Gudiniavičius	Prof. Dr	<p>Grigas, V., Gudiniavičius, A. (2025). The Future of e-Book Copyright Control: On Finding a Technological Balance Between Authorized Use of e-Books, Reader's Experience, and Privacy. <i>Pub Res Q</i> 41, 390–404. https://doi.org/10.1007/s12109-025-10048-2</p> <p>Petreikis, T., Grigas, V., Gudiniavičius, A. (2024). <i>Lietuvos mokslo periodikos leidyba: nuo spausdintų žurnalų iki skaitmeninių ekosistemų</i>. Vilniaus universiteto leidykla.</p> <p>Grigas, V., Gudiniavičius, A. (2024). Knygų piratavimas: kas tai – neteisėta veikla ar sumanus medijų panaudojimas? Iš: <i>Artimas tolimes medijų pasaulis: virsmas, ribos ir būdai tai suprasti: kolektyvinė monografija</i>, p. 189-202. Vytauto Didžiojo universitetas.</p>

		<p>Petreikis, T., Šuminas, A., Grigas, V., & Gudinavičius, A. (2024). Lietuvos mokslo žurnalų leidybos kiekybiniai pokyčiai 2015–2022 m.: viešojo ir privataus sektorių prisitaikymas prie kintančių sąlygų. <i>Knygotyra</i>, 82, 206–242. https://doi.org/10.15388/Knygotyra.2024.82.8</p> <p>Macevičiūtė, E., Manžuch, Z., Gudinavičius, A. (2023). The role of curiosity triggers and features in digital literacy training. <i>Library & information science research</i>, 45(4), 101268, p. 1–9. https://doi.org/10.1016/j.lisr.2023.101268</p> <p>Grigas, V., & Gudinavičius, A. (2023). Book Publishing and Print Disabilities: The extent of book famine in Lithuania. <i>Logos</i>, 34(1), 61–70. https://doi.org/10.1163/18784712-03104059</p> <p>Gudinavičius, A., Grigas, V. (2022). Two Decades of E-Book Publishing in a Small Language Market: Publishers Lag Behind Pirates. <i>Pub Res Q</i>, 38(3), 490–502. https://doi.org/10.1007/s12109-022-09894-1</p> <p>Grigas, V., Gudinavičius, A. (2022). Stakeholders' perceptions of book piracy's benefits to society in Lithuania. <i>Global knowledge, memory and communication</i>, 71 (6-7), 605–618. https://doi.org/10.1108/GKMC-08-2020-0118</p> <p>Gudinavičius, A., Grigas, V. (2022). Causes and consequences of unauthorized use of books: readers, authors, and publishers' perspective. <i>Online information review</i>, 46 (5), 886–903. https://doi.org/10.1108/OIR-03-2021-0133</p> <p>Grigas, V., Gudinavičius, A., & Černevičiūtė, E. (2021). Nelegaliai platinamų knygų naudojimas Lietuvoje. <i>Information & Media</i>, 91, 83–99. https://doi.org/10.15388/Im.2021.91.53</p>
Rimvydas Laužikas	Prof. Dr	<p>Fomin, V., Abdelkafi, N., Blind, K., & Laužikas, R. (2025). The framework model for the promotion of education about standardisation in line with EU values and interests. Iš K. Jakobs & H. A. P. Gelvez (Red.), <i>EURAS 2025. The 29th EURAS annual standardisation conference Empowering standardisation through education, 18-20 June, 2025, Madrid, Spain: Proceedings</i> (p. 105–121).</p> <p>Laužikas, R., & Žižiūnas, T. (2025). Application of AI-based methods in the study of textual historical</p>

sources and urban heritage landscapes. Iš G. Dzemyda, J. Bernatavičienė, & J. Kacprzyk (Red.), *Data science in applications. Towards AI-driven approaches* (Studies in Computational Intelligence, t. 1206, p. 125–140). Springer Nature. https://doi.org/10.1007/978-3-031-88486-3_6

Dallas, C., Kelpšienė, I., Laužikas, R., & Gribovskis, J. (2024). Socialinių tinklų tyrimų duomenų archyvo funkciniai reikalavimai, projektavimas ir įgyvendinimas. *Information & Media*, 100, 22–37. <https://doi.org/10.15388/Im.2024.100.2>

Laužikas, R., & Dallas, C. (2024). The message is the Agent: Nexus and Semiosphere in social media communication. Iš E. Zantides & S. Andreou (Red.), *Semiotics and visual communication IV: Myths of today* (p. 2–29). Cambridge Scholars Publishing.

Fomin, V. V., & Laužikas, R. (2024). Development of an automated urban heritage monitoring tool: Between a techno-fix and fallacy. *Technology in Society*, 79, straipsnis 102717. <https://doi.org/10.1016/j.techsoc.2024.102717>

Kelpšienė, I., Armakauskaitė, D., Denisenko, V., Kirtiklis, K., Laužikas, R., Stonytė, R., Murinienė, L., & Dallas, C. (2023). Difficult heritage on social network sites: An integrative review. *New Media & Society*, 25(11), 3137–3164. <https://doi.org/10.1177/14614448221122186>

Kirtiklis, K., Laužikas, R., Kelpšienė, I., & Dallas, C. (2023). An ontology of semiotic activity and epistemic figuration of heritage, memory and identity practices on social network sites. *SAGE Open*, 13(3), 1–25. <https://doi.org/10.1177/21582440231187367>

Seaton, K. L., Laužikas, R., McKeague, P., Moitinho de Almeida, V., May, K., & Wright, H. (2023). Understanding data reuse and barriers to reuse of archaeological data: A quality-in-use methodological approach. *Internet Archaeology*, 63, 1–33. <https://doi.org/10.11141/ia.63.8>

Fomin, V., Laužikas, R., & Žižiūnas, T. (2022). Digital urban heritage preservation practices: Framing a new European standard. Iš *EURAS proceedings 2022: Standardisation and open source, 8–10 June 2022, Glasgow University* (p. 125–142). Glasgow University.

	<p>Fomin, V., Putrimas, M., Žižiūnas, T., & Laužikas, R. (2022). Reference architecture for AI-based urban heritage preservation risks monitoring tool. <i>Baltic Journal of Modern Computing</i>, 10(2), 142–158. https://doi.org/10.22364/bjmc.2022.10.2.04</p>
	<p>Laužikas, R., & Armakauskaitė, D. (2022). „Išmemorialinti“, uždaryti ar palikti: Venclovų namų-muziejaus veikimas interneto erdvėje. <i>Tiltai</i>, 2, 140–158. https://doi.org/10.15181/tbb.v88i1.2502</p>
	<p>Laužikas, R., Enquist, J., Luengo, P., Šošić-Klindžić, R., & Toumpouri, M. (2022). Discussing archaeology and the nation in six European countries: A discourse analysis. <i>Journal of Community Archaeology & Heritage</i>, 9(3), 161–174. https://doi.org/10.1080/20518196.2021.1988210</p>
	<p>Laužikas, R., Žižiūnas, T., & Fomin, V. (2022). Novel technologies as potential catalyst for democratizing urban heritage preservation practices: The case of 3D scanning and AI. <i>Information & Media</i>, 93, 93–115. https://doi.org/10.15388/Im.2022.93.64</p>
	<p>Plikynas, D., Miliauskas, A., Laužikas, R., Dulskis, V., & Sakalauskas, L. (2022). The cultural impact on social cohesion: An agent-based modeling approach. <i>Quality & Quantity</i>, 56(6), 4161–4192. https://doi.org/10.1007/11135-021-01293-6</p>

Approved by the Doctoral Committee of the field of Communication and Information of the Social Sciences area on 15 December 2025, minutes of the meeting No. (7.17 E)15600-KT-667

Chair of the Committee Prof. Dr Aušra Navickienė