COURSE UNIT (MODULE) DESCRIPTION

Course unit (module) title	Code
Data Analytics for Arts Organisations	

Academic staff	Core academic unit(s)
Coordinating: Assoc. prof. dr. Audronė Rimkutė **Other:**	Kaunas Faculty

Study cycle	Type of the course unit
Second (Master's level)	Compulsory

Mode of delivery	Semester or period when it is delivered	Language of instruction
In-class (on-site)	Spring	English

Requisites	
Prerequisites: Arts management research methods	**Co-requisites (if relevant):**

Number of ECTS credits allocated	Student's workload (total)	Contact hours	Individual work
5	130	37	93

Purpose of the course unit		
The course aims to provide knowledge about the key concepts, methods, and tools of data analytics in art organizations and to develop the ability to practically apply data analysis within such organizations.		
Learning outcomes of the course unit	**Teaching and learning methods**	**Assessment methods**
Will be able to explain the need for, significance of, and role of data in the management of art organizations, as well as the main data analysis methodologies.	Lectures, study of scientific literature, case study	Exam, responses to open and closed questions.
Will learn to apply the most relevant data analysis methods and tools for data in art organizations.	Seminars assignments using SPSS and CATMA	Assessment of assignments based on criteria.
Will be able to critically assess the reliability, relevance, and applicability of data analysis results for management decisions in art organizations.	Case study	Assessment of case analysis based on criteria.

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. Introduction to data analytics in arts organizations. The concept and process of data analytics. The need for data and its benefits for organizations. 2**.** Key organizational performance indicators, methods for constructing and monitoring them, and their link with the organization's strategy. Types and sources of data in arts organizations.	4		4				**8**	**16**	Study of scientific literature (Aminah et al. 2018, Schiuma, G., Carlucci, Gilmore et al. 2018). Preparation of a case analysis – data collection and analysis plan for an art organization.
3. The concept of variables, classification of variables according to their function in research. Measurement scales of variables – nominal, ordinal, interval and ratio. 4. Data entry and management in SPSS. Definition of variables in SPSS. Handling missing data. Entering and editing data.	2		2				**4**	**16**	Learning of data input and coding in SPSS software.
5. Analysis of quantitative data using descriptive statistical methods. Main descriptive statistics methods: frequency analysis, measures of central tendency, analysis of data distribution, measures of dispersion. 6. Descriptive statistics functions in SPSS.	4		2				**6**	**16**	Learning of data editing in SPSS software.
7. Fundamentals of correlation and regression analysis. The concept and characteristics of statistical relationships. Statistical significance and strength of relationships between variables. 8. Analysis of relationships between nominal, ordinal and numerical variables using SPSS.	2		4				**6**	**16**	Learning of data editing in SPSS software.
9. The process of qualitative data analysis. Preparing qualitative data for analysis. Coding qualitative data. Developing a coding system and describing codes. Themes and categories in qualitative data analysis. Interpreting qualitative data and presenting results. 10. Qualitative data analysis with CATMA: logging in to the software, getting acquainted with the main functions: uploading texts, creating annotations, tagging systems and visualizations.	4		4				**8**	**16**	Compiling a document set for analysis with CATMA, conducting the analysis using CATMA. Preparing the qualitative data analysis with CATMA project report.
Consultation		**2**					**2**		
Exam							**3**	**13**	Preparation for the exam – repetition of course material.
Total	**16**	**2**	**16**				**37**	**93**	

Assessment strategy	Weight %	Deadline	Assessment criteria
Case study	25	3rd week of the semester	Students prepare and present a performance indicator project for one art organization. **Structure:** **1. Organization description:** • What is the organization's mission (strategy)? • What are the organization's main areas of activity? • Who are the organization's clients (stakeholders)? How are their interests related to the organization's performance? • What are the financial goals of the organization? • Which internal processes are most important in the organization? • What innovations and employee competencies are important for the organization? **2. Organization performance indicators according to the balanced scorecard dimensions** (*If the organization already uses such a system, students must improve it based on their insights*): • **Financial perspective:** Indicators related to the organization's financial performance. • **Customer (stakeholder – for non-profit organizations) perspective:** Indicators related to the satisfaction and experience of founders, visitors/audience, or the professional community. • **Internal processes perspective:** Indicators related to the efficiency of the organization's operational processes. • **Learning and growth perspective:** Indicators related to employee competencies and the organization's ability to adapt to change. **Indicators must be clearly defined** (What do they measure?), their link to the organization's mission and strategy must be evident; their type must be indicated (quantitative or qualitative). **3. Data collection plan** • What data is needed for each indicator? • From which sources can the data be collected? • What methods will be used to collect the data? • How often, and who will collect and analyze the data? • How will the data be analyzed? • How will the data be presented to stakeholders? After the analysis, students must prepare a written report (up to 5 pages), which must be uploaded to the LMS (VMA) and presented during the seminar using a slide presentation. The report must include: 1. A brief description of the organization. 2. A list of performance indicators, their descriptions, and justification. 3. A detailed data collection plan (methods, sources, frequency, responsible departments or roles). **Assessment criteria for the task:** 1. **Selection and justification of indicators:** Do the indicators adequately reflect the organization's performance goals? 2. **Quality of the data collection plan:** Are the chosen methods appropriate for each indicator? Is the data collection process realistic and logical?

			3. **Comprehensiveness and structure:** Is the report thorough and well-structured? 4. **Creativity and innovation:** Does the project show new, creative solutions in the context of art management?
Quantitative data analysis project	25	12th week of the semester	Students must complete a **quantitative data analysis project using SPSS** and prepare a report, which must be uploaded to the LMS (VMA) and presented during the seminar with a slide presentation. **Report structure:** 1. **Brief description of the survey objective**, explaining how the collected data contributes to the organization's indicator system developed in the first assignment. 2. **Table of survey questions.** Justification of the questionnaire – what each question is intended to uncover. 3. **Summarized descriptive statistics** (tables and charts) with explanation (e.g., why it is important to know a mean, median, mode, etc.). 4. **Results of relationship analysis** (e.g., correlation coefficients) with justification (why this relationship needs to be tested). 5. **Interpretation:** What insights can be drawn from the data analysis? **Appendices:** Data file, questionnaire. **Assessment criteria:** 1. The questionnaire's alignment with the survey goal and task requirements. 2. Proper data entry and editing. 3. Correct application of descriptive statistical methods. 4. Accuracy and justification of the relationship analysis. 5. Soundness and originality of interpretation and insights.
Qualitative data analysis project	25	Last week of the semester	Students must complete a **qualitative data analysis project using CATMA** and prepare a report (5–7 pages), which must be uploaded to the Moodle (VMA) and presented during the seminar with a slide presentation. **Structure of the report:** **1. Introduction** A brief presentation of the addressed issue – the selected organization's balanced scorecard requires qualitative data. List the questions you are trying to answer by analyzing qualitative data. Provide a short description of the analyzed texts – if interviews, state when and from whom they were collected; if media articles, indicate where and when they were published. **2. Analysis** **2.1. Analysis categories and their theoretical justification** Describe and explain the system of categories used in the analysis (tagsets and tags). Connect it with the questions you're trying to answer. Describe the coding process – did the selected categories change? Which categories emerged "from the data"? Include a screenshot (print screen) from CATMA showing your tagging system.

			2.2. Description of the analysis results Present the answers to your research questions, supported by quotation tables and appropriate visualizations. Formulate insights for organizational management. **3. Conclusions** Provide concise answers to the questions formulated in the introduction. Add generalized insights useful for improving the organization's indicator system and overall management. **Appendices:** Analyzed texts, CSV file from CATMA with annotations and tags. **Assessment criteria:** 1. Clarity of problem formulation 2. Logical structure and appropriateness of the category system in answering the research questions 3. Accuracy and consistency of text annotation 4. Appropriate presentation of analysis results 5. Clarity of insights and their relevance to art organization management
Exam	25	During the session	During the exam, students must answer **5 open-ended** and **20 closed** questions covering the entire course material. Each open-ended question is graded on a **10-point scale**. **Assessment criteria of answers to open-ended questions:** • **10 points** – The answer is clear, complete, and thorough; it addresses the core of the question and demonstrates generalized knowledge and critical thinking. • **9 points** – The answer is clear, complete, and thorough; it addresses the core of the question and demonstrates generalized knowledge. • **8 points** – The answer is clear, complete, and thorough; it addresses the core of the question. • **7 points** – The answer is clear but incomplete or not detailed, though the key points are mentioned. • **6 points** – The answer is unclear or incomplete or not detailed; some important aspects are missing. • **5 points** – The answer is unclear or incomplete or not detailed; only one or a few key aspects are mentioned. • **4–1 points** – The question is not answered. Answers to closed-ended questions are assessed according to the number of correct answers. **Weight in final grade:** • Open-ended questions: **50%** of the total exam grade • Closed questions: **50%**, based on the number of correct answers
Calculation of the final grade: Interim grades are included in the final cumulative grade formula without rounding. The final grade is rounded using standard (mathematical) rounding.			
The course can be taken externally. The external assessment exam consists of **5 open-ended** and **20 closed** questions based on the entire course material. Additionally, the student must independently complete **all three course assignments**.			
Rules for the use of generative artificial intelligence (AI) models in studying this course			
Students may use AI • for creating visualizations for assignments; • for searching for literature. AI usage is prohibited to complete assignments or to generate their texts. The analysis must be carried out by the student themselves. **Disclosure of AI use:**			

1. In the introduction of the assignment, when describing the methods used, students must clearly indicate which AI tools were used and how they were applied in the task.
2. AI-generated parts of the assignment (e.g., data visualizations) must be identified, stating the AI tool used (see also: *Guidelines for the Use of Artificial Intelligence at Vilnius University*, approved by the University Senate on June 18, 2024, Resolution No. SPN-54).

Author (-s)	Publishing year	Title	Issue of a periodical or volume of a publication	Publishing house or web link
Required reading				
Aminah Abdullah, Iqbal Khadaroo, Christopher J. Napier.	2018	Managing the performance of arts organisations: Pursuing heterogeneous objectives in an era of austerity.	*The British Accounting Review*, Volume 50, Issue 2, 174-184	https://doi.org/10.1016/j.bar.2017.10.001
Gilmore, A., Arvanitis, K., Albert, A.	2018	"Never Mind the Quality, Feel the Width": Big Data for Quality and Performance Evaluation in the Arts and Cultural Sector and the Case of "Culture Metrics", In: Schiuma, G., Carlucci, D. (eds.)*Big data in the Arts and Humanities*, 28-38.		Taylor & Francis
Kaufmann, U.H., Tan, Amy B. C.	2021	*Data Analytics for Organisational Development*		Wiley
Recommended reading				
Marr, B.	2012	*Key Performance Indicators The 75 measures every manager needs to know*		Business & Economics
Mills, Kathy A.	2019	*Big data for Qualitative research*		Routledge
Moore, P.	2016	Big Data and structural organisation in major arts bodies: an evolving ethnographic method.	*Cultural Trends*, 25:2, 104-115.	https://doi.org/10.1080/09548963.2016.1170945
Morrow, G.	2019	Artist management in the age of big data. *The Routledge Companion to Arts Management*		Routledge
Morrow, G. Borghini, S.	2020	Data analysis and the arts The mistake of ignoring the numbers. *Managing the Cultural Business.*		Routledge
Papaioannou, G.	2021	Museum Big Data: Perceptions and Practices. In: Prodromou, T. (eds) *Big Data in Education: Pedagogy and Research . Policy Implications of Research in Education*, vol 13. Springer, Cham.	vol 13.	https://doi.org/10.1007/978-3-030-76841-6_9

Walliman, N.	2017	Qualitative data analysis. In: *Research methods. The basics*		Routledge