COURSE UNIT (MODULE) DESCRIPTION

Course unit (module) title	Code
PRACTICAL NO-CODE PROGRAMMING	

Academic staff	Core academic unit(s)
Assoc. prof. dr. Ilona Veitaitė	Kaunas Faculty Institute of Language, Literature and Translation Studies ☐ Institute of Social Sciences and Applied Informatics ☒

Study cycle	Type of the course unit
First ☒ Second ☐	Compulsory Course ☒ Optional Couse ☐ Course Unit (Module) of the General University Studies ☐ Course Unit (Module) of Individual Studies ☐ Interdisciplinary Studies Course Unit (Module) ☐

Mode of delivery	Semester or period when it is delivered	Language of instruction
Auditorium and self-work	Spring semester	English

Requisites	
Prerequisites: Fundamentals of Information Technology, Fundamentals of Artificial Intelligence, Technologies for Information Delivery Online	**Co-requisites (if relevant):**

Number of ECTS credits allocated	Student's workload (total)	Contact hours	Individual work
5	130	48	82

Purpose of the course unit		
To develop students' ability to design, implement, test and critically evaluate digital solutions using no-code platforms, visual programming, workflow automation and AI-enabled services for language-related and organisational tasks, without requiring conventional programming.		
Learning outcomes of the course unit	**Teaching and learning methods**	**Assessment methods**
Will possess knowledge of key no-code programming tools and resources; will be able to understand and explain the development process of AI systems (from data collection and processing to model training and evaluation), as well as generative AI technologies, models, and algorithms; and will be capable of applying these in practice when creating or improving AI systems. Will master advanced machine learning technologies and algorithms, acquiring the ability to ensure effective interaction between computers and human language through the use of Natural Language Processing (NLP) methods.	Interactive lectures, demonstrations, guided comparison, discussions, guided practical assignments, prototyping, peer usability testing, workflow mapping, prompt testing, assistant prototyping, comparative case studies, project-based learning, workshops, and demonstrations.	Practical assignments, case studies, functional project, exam.

Will be able to analyze and systematize material from various sources, utilizing modern information technologies, contemporary datasets, linguistic research tools, AI platforms, historical and current editions of literary texts, library resources, etc. Will be able to express thoughts fluently in English (at a C1 level), while considering and critically evaluating communicative intent, the target audience, social and cultural context, and other relevant factors.		

Content	Contact hours							Individual work: time and assignments	
	Lectures	Tutorials	Seminars	Workshops	Laboratory work	Internship	**Contact hours, total**	**Individual work**	**Tasks for individual work**
Introduction to the course. Introduction to no-code development and visual programming. No-code, low-code and traditional programming; visual logic, events, conditions, actions and application prototypes. Exploration of no-code platforms.	2				4		**6**	**3**	Practical Assignment 1: Develop a simple interactive multilingual application using visual logic.
Data modelling, digital forms and information management. Structured data, fields, records, relationships, data validation and conditional form logic. Development of terminology databases and digital data collection systems. Task for Seminar 1.	2				4		**6**	**3**	Practical Assignment 2: Create a translation request form with conditional logic and structured data collection.
Development of data-driven no-code applications. Application interfaces, data sources, CRUD operations, user roles, navigation, accessibility and usability.	2				4		**6**	**4**	Practical Assignment 3: Develop a simple application for managing translation projects or terminology records.
Workflow automation and service integration. Business process modeling, triggers, actions, conditions, data mapping, multi-step workflows and error handling.	2				4		**6**	**4**	Practical Assignment 4: Develop an automated workflow connecting a form, database and notification service.
No-code platform selection and digital solution evaluation. Comparison of application builders and automation platforms according to functionality, usability, costs, integration, security and maintainability. Project task.	2		2				**4**	**3**	Seminar 1: Case study on selecting a no-code solution for a multilingual communication agency.
AI integration in no-code workflows. AI-powered automation, prompt design, text classification, summarization, structured outputs and evaluation of AI-generated results. Task for Seminar 2.	2				4		**6**	**4**	Practical Assignment 5: Develop an AI-assisted multilingual text processing workflow.
AI assistants, responsible automation and solution testing. Knowledge-based assistants, conversational interfaces, human-in-the-loop processes, data					2		**2**	**2**	Test a knowledge assistant or AI workflow; identify limitations and

privacy, AI reliability and safeguards. Practical experimentation with AI assistants and workflow testing.									safeguards for the final project.
No-code project management and organizational implementation. Requirements analysis, MVP development, deployment, maintenance, vendor dependency and organizational impact.	2		2				**4**	**3**	Seminar 2: Critical evaluation of an AI-powered multilingual customer support system.
Development, integration and evaluation of no-code solutions. Integration of interfaces, data sources, automation and AI components. Troubleshooting, usability testing, documentation and preparation for deployment. Guided final project development and testing.					2		**2**	**4**	Complete the final project, testing report and presentation materials.
Final project presentation, defence and reflection. Evaluation of no-code solutions, sustainability, limitations and future developments. Demonstration and defence of completed projects, including functionality, technical decisions, testing and critical reflection.	2				4		**6**	**2**	Submit final project documentation; prepare for project defence and individual examination.
Total	**16**		**4**		**24**		**48**	**82**	
Note: No more than 4 contact hours may be replaced by guest lectures from social partners or educational visits to social partner organizations.									

Assessment strategy	Weight %	Deadline	Assessment criteria
Practical Assignments (PA) x 5	25%	During the semester	Five practical assignments focused on applying no-code development principles to create interactive applications, digital forms, data-driven solutions, automated workflows, and AI-assisted processes. Students demonstrate their ability to select and use appropriate tools, implement functional solutions, and test their performance.. The assessment on the 10-point scale according to the assessment criteria of the VU.
Case Study (CS) x 2	20%	During the semester	Two case-study seminars focused on analyzing real-world scenarios involving no-code platform selection, digital process automation, and AI-powered solutions. Students critically evaluate technological alternatives, identify benefits and limitations, and propose justified recommendations through group discussions and presentations. The assessment on the 10-point scale according to the assessment criteria of the VU.
Functional No-Code Project (NCP)	35%	During the semester	Students develop and demonstrate a functional no-code solution addressing a language-related or organizational problem. The solution should include a user interface, structured data, automation, and an AI-supported feature where feasible. Submit brief documentation and defend the project.The assessment on the 10-point scale according to the assessment criteria of the VU.
Exam (E)	20%	Exam Session	e examination may be taken only after all mandatory assessed work has been completed. It covers the integrated theoretical and practical course material. Students answer written questions, explain technical decisions, interpret examples or code, and apply course concepts to provided situations. The assessment on the 10-point scale according to the assessment criteria of the VU.
Final Grade = (PAx5)x0.25+(CSx2)*0.2+NCPx0.2+Ex0.2			**Exam grade must be ≥5**
Based on the highest interim results, the lecturer may award a high final grade instead of requiring an exam.			

REGARDING THE EXTERNAL EXAMINATION OF THE COURSE UNIT

Mark ☒					If permitted, please provide the conditions
Not permitted	☐	**Permitted**	☒		**Final Grade = NCPx0.5+Ex0,5**

REGARDING THE USE OF GENERATIVE ARTIFICIAL INTELLIGENCE (GenAI) TOOLS (SUCH AS "CHATGPT", ETC.) WHEN STUDYING THE COURSE UNIT

Mark ☒				If permitted, please provide the conditions
Not permitted	☐	**Permitted**	☒	*The use of an Artificial Intelligence (AI) generative model must be disclosed, so if an AI generative model has been used in a text, paper, report or other work, this must be clearly stated (with appropriate citations and/or a declaration of the use of an AI generative model). Failure to disclose the use of an AI generative model in an academic work is considered academic dishonesty. In order to ensure that generative AI tools (ChatGPT, etc.) have not been used in the preparation of the essay (i.e. the content of the essay has not been generated by the AI tools), if not disclosed, the lecturer has the right to ask follow-up questions, to use the AI detection tools and, if necessary, to modify or cancel the grade of the assignment.*

REGARDING ACADEMIC PROGRESS

A student who (1) **throughout the semester consistently** fails to demonstrate **progress in achieving the expected learning outcomes of a subject (module)** during the practical classes (seminars, exercises, laboratory work, etc.) and (2) fails to complete all interim assessment requirements and tasks within the time specified in the course description, is not allowed to participate in the examination session.

Author (-s)	Publishing year	Title	Issue of a periodical or volume of a publication	Publishing house or web link
Required reading				
T RAISE, Pang, N., Breazeal, C., & Abelson, H.	T RAISE, Pang, N., Breazeal, C., & Abelson, H.	T RAISE, Pang, N., Breazeal, C., & Abelson, H.	Online resource	https://raise.mit.edu/resources/curricula/computational-action/
Webflow	2020	The no code revolution		https://assets-global.website-files.com/5cf6b7202bf8199f50d43e6c/5ebcc494c541f0341f1298d4_The-no-code-revolution.pdf
Techrepublic	2021	Business Leader as Developer: The Rise of No-Code and Low-Code Software		https://www.zdnet.com/article/the-rise-of-no-code-and-low-code-software-free-pdf/
Bryter	2021	The General Counsel's Guide to No-code		https://bryter.com/wp-content/uploads/2021/06/No-Code-for-General-Counsel.pdf
Nielsen Norman Group	n.d.	Usability Heuristics for User Interface Design	Online resource	https://www.nngroup.com/articles/ten-usability-heuristics/
W3C WAI	n.d.	Web Accessibility Initiative Tutorials	Online resource	https://www.w3.org/WAI/tutorials/
NIST	2023	AI Risk Management Framework (AI RMF 1.0)	NIST AI 100-1	https://doi.org/10.6028/NIST.AI.100-1
Recommended reading				

MIT App Inventor	n.d.	App Inventor Concept Cards	Online resource	https://appinventor.mit.edu/explore/resources/beginner-app-inventor-concept-cards
Simplilearn	2021	Low-Code and No-Code Development		https://www.simplilearn.com/low-code-and-no-code-development-guide-pdf
unqork	2022	No-Code vs. Low-Code		https://www.unqork.com/wp-content/uploads/2022/08/ebook-no-code-vs-low-code.pdf
Simon Heuschkel	2022	The impact of no-code on digital product development		https://arxiv.org/abs/2307.16717
Quixy Editorial Team	2023	Sneak-peek into Top 10 Predictions for No-Code Low-Code Adoption by Businesses		https://quixy.com/blog/top-10-predictions-for-no-code-low-code/

NOTE: *Including Open Educational Resources in the reading list is recommended*