Simon Kuznets Kharkiv National University of Economics

Syllabus of the course

"Applied programming project"

Speciality	*D3 Management* *F6 Information Systems and Technologies*
Study Programme	*Management and Information Technologies*
Study cycle (Bachelor, Master, PhD)	*the first (Master's) level of higher education*
Course status	*mandatory*
Language	*English*
Term	*1 year, 1 semester*
ECTS credits	*4*
Workload	*Lectures – 30 hours.*
	Laboratory classes – 30 hours.
	Self-study – 60 hours.
Assessment system	*Grading*
Department	*Department of Information Systems* *Nauky Avenue 9-A, c. Kharkiv, main building, auditorium 413* *Phone: +38 (057) 702-18-31* *website: https://kafis.hneu.net*
Teaching staff	*Serhii ZNAKHUR, PhD in Information Systems, associate professor*
Contacts	*serhii.znakhur@hneu.net*
Course schedule	*Lectures: according to the schedule* *Laboratory classes: according to the schedule*
Consultations	*at the Department of Information Systems: face-to-face sessions in accordance with the consultation timetable; individual sessions, chat via the PNS and Zoom*

Learning objectives and skills:

*The course **aims** to provide students with a system of theoretical knowledge, practical skills and abilities for planning, structuring and conducting a full software project life cycle from inception to delivery using project management frameworks, mastering system programming languages and modern development toolchains to implement practice-oriented software applications.*

Structural and logical scheme of the course

Prerequisites	Postrequsites
Training of Language, Research and Intercultural Skills	Machine learning Design and implementation of software systems Digital business modelling Complex training

Course content

Content module 1. *Project planning*

Topic 1. Software project life cycle
Topic 2. Project management frameworks
Topic 3. Application of software engineering best practices
Topic 4. Formation of interdisciplinary project teams and allocation of roles
Topic 5. Feasibility analysis and problem statement definition of the project
Topic 6. Introduction to collaborative development tools
Topic 7. Scope management: requirements, use-case modelling, acceptance criteria formulation
Topic 8. Risk management. Resource planning and time planning

Topic 9. Architecture and definition of internal module interfaces
Content module 2. *Development, testing, and evaluation*
Topic 10. Creating end-to-end solution
Topic 11. Configuration management (Git)
Topic 12. CI and CD best practices
Topic 13. Integration tests, end-to-end tests, and acceptance testing
Topic 14. Performance evaluation, bug tracking. Code quality assessment
Topic 15. User acceptance testing. Preparation demo, delivery of the final project report, and presentation

Teaching environment (software)

(Multimedia projector, S. Kuznets PNS, Corporate Zoom system)

Assessment system

Assessment of students' learning outcomes is carried out by the University according to the cumulative 100-point system.

Current control is carried out during lectures and practical (seminar) classes and aims to assess the level of students' readiness to perform particular tasks, and is assessed by the amount of scored points.

The maximum amount during the semester – 100 points; the minimum amount required is 60 points.

Current control includes the following assessment methods: assignments on a particular topic; testing; presentations, and essay writing.

More detailed information on assessment and grading system is given in the technological card of the course.

Course policies

Teaching of the academic discipline is based on the principles of academic integrity.

Violation of academic integrity includes academic plagiarism, fabrication, falsification, cheating, deception, bribery, and biased assessment.

Education seekers may be brought to the following academic responsibility for breach of academic integrity: repeated assessment of the corresponding type of learning activity.

More detailed information about competencies, learning outcomes, teaching methods, assessment forms, self-study is given in the Course program