DESCRIPTION OF A STUDY COURSE – SYLLABUS

Title of a course	**Programming – practicum**				
Study programme	**Professional undergraduate study Information Science**				
Status of a course	Obligatory				
Year of study	3	**Semester (Winter/Summer)**	W	**ECTS credits**	5

Goals of a course

Acquiring knowledge of data model optimization procedures. Acquiring knowledge and competences that enable the development and maintenance of project documentation of an information system. Acquiring knowledge and competences in the field of application of software tools for designing and developing information system. Acquiring knowledge and competencies in the field of application of software tools for rapid software development.

Conditions for enrolling course

Data and Process Modelling, Database Systems, Information Systems Development

Learning outcomes on a level of a study programme which includes course

Outcome 2: Apply business information system design methods.
Outcome 4: Develop an application solution for the Internet and desktop environment.
Outcome 6: Apply appropriate business information system protection techniques.
Outcome 7: Design and produce digital multimedia materials needed in business systems.
Outcome 11: Apply mathematical and statistical methods in information science.
Outcome 12: Apply engineering methods and principles in information science.

Expected learning outcomes on a level of a course

1. Use methods to model processes and data, and model optimization procedures in the design of project documentation for IS.
2. Develop project documentation for IS development.
3. Explain and distinguish user interface modelling methods and use them in IS development.
4. Use rapid software development tools and create software for engineered IS.
5. Explain CASE, and distinguish the application areas of CASE and RAD tools.
6. Explain the application software architecture, and distinguish layers of application software.

Content of a course

Access to more complex forms of programming. Principles of structured program modelling. Techniques of programming, interactive work with a computer, operations with numbers, principles of selection and conditioned procedures. Programming language Visual Basic. Introduction into Visual Basic. Working environment. Application booting. Basics of programming languages. Modules. Procedures. Declaration of variables and types of data. Operators. Visual Basic controls. Menus. Accelerators. Visual effects. Working with dialogs. Graphics and graphical methods. Print methods. Interactions with environment. Databases. Bugs. Projects. MIDI application tables. Databases access. Communication between applications. Optimization.

Teaching modes	☒ lectures ☐ auditory exercises ☒ seminars and workshops ☐ distance learning ☐ field classes	☒ individual assignments ☐ multimedia and network ☐ laboratory ☐ supervisor's work ☐ other _____

Grading, evaluation and monitoring of students' work continuously during lectures and exams

Grading is based upon evaluation course's learning outcomes' adoption. Grading is performed continuously during lectures and/or during exam, in compliance with the provisions of Regulation on the assessment of students.