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| Study program: Modern computer technologies | | | |
| Course title: VBA Programming | | | |
| Professor/assistant: Dušan M. Stefanović | | | |
| Type of course: elective | | | |
| ECTS credits: 6 | | | |
| Pre-requisites: none | | | |
| Aims of the course: The purpose of the course is to familiarize students with the basic elements and principles of object programming in Visual Basic developing macros and applications for Microsoft Office package (Excel and Access). | | | |
| Learning outcomes: Applying recorded and independently created macros for business processes automatization. Development of an appealing and functional user interface. Creating and implementing procedures, functions, events and user forms. Data validation and techniques for code debugging. | | | |
| Syllabus | | | |
| <u>Theoretical part</u> Introduction to VBA. Similarities and differences between VBA for Excel and VBA for Access. VBA editor. Working with objects, collections and hierarchy. The basic principles of programming in VBA (program comments, data types, logical and arithmetic operations, properties, methods). Control of the program execution flow (if then else, select case, for next, do while the structure). Interaction with the outside world (Input Box and Message Box control). Creating and calling functions. Working with objects, determining the type of object and displaying the available properties, methods and events for the given object. Reading the parameters of objects of the same collection using each structure. Working with one-dimensional and two-dimensional arrays. Working with user forms (Check Box, Option Button, Frame, Command Button, ...) | | | |
| <u>Practical part</u> It follows methodological units of theoretical part and deals with macros that provide automatic execution of various tasks in Excel from formatting, validation, filtering, searching and data processing. Working with files and folders. Connecting to Access and MS SQL databases and importing desired data into Excel. Creating an appealing and functional user interface for entering, searching and displaying data in Excel 2013 and Access 2013. | | | |
| Literature | | | |
| 1. John Walkenbach, <i>Excel 2013 Power Programming with VBA</i> , WILEY , 2014. 2. Steven M. Hansen, <i>VBA for absolute beginners</i> , Computer library, 2005. 3. Julitta Korol, <i>Microsoft Access 2013 Programming by Example with VBA, XML, and ASP</i> , MLI 2014. | | | |
| Number of active classes | | | Other forms of teaching: |
| Lectures: 30 | Practical classes: 30 | Research work: | |
| Teaching methods Combination of interactive approach with practical problem solving | | | |
| Grading system (maximum 100 points), grading scale from 5 to 10: below 51 points grade 5, grade 6 from 51-60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91-100 points. | | | |
| Pre-exam obligations | points | Final exam | points |
| activity during theoretical lectures | 10 | written exam | 30 |
| practical training | 20 | oral exam | |
| colloquium(s)/seminar papers | 30 | | |
| Sum | 30 | Sum | 30 |