

Course Syllabus

Course Business Programming I

ECTS	Credit hours	Language of instruction
4	2	English

1. Learning Outcomes

After attending this course, students will be able to:

[Click here to enter learning outcomes for subject-related skills.](#)

- the basics of programming and the object-oriented paradigm,
- the fundamental concepts of automating (scripting) Windows and Windows applications and to apply them on your own,
- the basics of the HTML mark-up language and Microsoft's DHTML (Dynamic HTML) as implemented in the Microsoft Internet Explorer (MSIE), which allows to embed scripts into HTML and use the MSIE browser as a graphical user interface (GUI) and print engine for scripts,
- to research the Internet (e.g. newsgroups, search engines) to learn about interesting additional possibilities of automating Windows applications,
- the basics of the very easy to learn and to apply free open-source scripting language ooRexx,
- finally, how to carry over script code between ooRexx and VBS (Visual Basic Script), which comes with Windows.
- „Visual Basic Script“ („VBScript“) from Microsoft.

In addition, this course fosters the following soft skills:

- Analytical and problem-solving skills
 - working independently on specific issues,
 - identifying and assessing strengths and weaknesses, potentials and risks,
 - developing possible solutions to problems and supporting innovation in organizations,
 - evaluating various approaches, strategies and possible solutions in terms of their applicability and implementation,
- Media literacy
 - using research resources (e.g. Internet search engines, lists, databases) to obtain necessary information and data to solve a task,
 - evaluating the quality and relevance of available information and data (e.g. the Internet),
 - using presentation media appropriately, and justifying the choice of the medium,
 - using new communication media appropriately (e.g. chat, video conference systems, discussion forums)

2. Course description and assessment

This lecture will serve as a basic introduction into the object-oriented thinking and programming applying the acquired knowledge to automate (script/remote-control) the Windows operating system and Windows applications. There are no pre-requisites necessary to be able to successfully follow this class!

In the course of this class you will learn how easy it is for example to remote-control Windows itself and end-user applications (like MS Office, OpenOffice, Eudora, Acrobat Exchange) and combine them with a simple script to form new applications that support and solve business process problems.

The learned knowledge will be applied in the form of little hands-on homework examples that are tackled in groups of two to three students, such that no one will be left on its own.

At the end of this lecture you will have fully understood all taught concepts and be able to apply them (using any scripting language). Besides the object-oriented concepts, you will learn about the Windows infrastructure technologies COM/OLE/ActiveX and (the lesser known) "Windows Script Host (WSH)" which play a very important role in automating/scripting Windows and Windows applications.

The acquired knowledge and first-hand experiences will create problem-solving skills that will set you apart from any of your colleagues. You will be able to create automated solutions with end-user applications for the business departments you will be working for!

For grading the class participation, the performance in the teamwork, the homework assignments, the final exam and the final project are evaluated.