

Course Syllabus

Course Business Programming II

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 fundamental concepts of automating (scripting/remote-controlling) Java, Java applications and applications with Java interfaces, and to apply them on your own,
- the basics and the architecture of the simple, but powerful “Bean Scripting Framework (BSF)” from the Apache Software Foundation and the scripting framework introduced in Java 6,
- the operating-system independent automation (scripting) of the free and open-platform business application OpenOffice.org (word-processor, spreadsheet),
- to systematically research the Internet (e.g. newsgroups, search engines) about interesting additional possibilities of automating applications via Java,
- to apply the very easy to learn (free, open-platform and open-source) scripting language ooRexx, which makes interfacing with Java extremely easy as well,
- to read and understand all of the Javadoc documentation that is readily available for Java and Java applications.

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

In this lecture an introduction to an astonishingly simple and interesting possibility of automating (scripting/remote-controlling) Java, Java applications and applications that supply programming interfaces for Java (e.g. ARIS, ImageMagick, jfreechart, OpenOffice, PDFBox, etc.) is given.

At the end of this class you will be able to understand all concepts and apply them with an arbitrary (script) programming language. This will empower you to automate Java as well as any other Java application. Because Java is by concept open-platform, Java (applications) can usually execute on any hardware and operating system! As a result, this class will enable you to create and deploy fully open-platform scripts (e.g. for the free "OpenOffice.org", a powerful open-platform end-user application, consisting of a word-processor, a spreadsheet, a database and a presentation module)!

You will apply this class' knowledge 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. You will see and experience, how easy it is in effect to create such impressive scripts! And best of all, they will run unchanged on Linux, Mac OSX and Windows!

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.