

PV178: Programming for .NET Framework

Course Outline, Organisation Information

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The course in a nutshell

- *Introductory course* to the C# programming language (version 3.0) and .NET Framework.
- Explain the concepts of C# programming language and put them into context.
- Demonstrate key features of .NET Framework.
- Provide entertaining exercises.
- Work with state of the art technologies.

Requirements

- Basic understanding of English¹.
- Basic programming skills (*any object oriented programming language*).
- Basic algorithmic skills (*The Design of Algorithms*).
- Couple of useful notes for those who remember something from the *Principles of Programming Languages* course.

¹If you understand this footnote, you're OK.

The course outline

- Introduction to the C# programming language and .NET Framework
- Base Class Library
- Memory management, compiling, metadata
- Microsoft Visual Studio
- WPF, WCF, other libraries
- C# 4.0, F# etc.
- Mono, DotGNU

Outline may change depending on the conditions.

Teaching

- 1 lecture per week (two hours)
- 1 seminar per week (one hour)
- Homeworks
- Project
- Exam

Lectures

- Basic coverage of the topics.
- Presentations, examples and all supplementary materials available online (in the e-learning agenda of IS MU).
- References to additional materials (books, websites).
- Presentations (slides) provide only basic outline for the covered topics.

Seminars

- Not intended as replacement for lectures.
- Extend the topic coverage of the lectures, provide additional information (may be required to pass the exam).
- Attendance is voluntary (presence is neither checked nor credited).
- Start working on given homeworks.
- Any materials from the seminars (exercises, example solutions, slides) available on-line.

Homeworks

- Easy.
- Extend the exercises from seminars.
- 5 homeworks, each for 4 points.

Exam

- Easy.
- Written, closed book exam.
- Multi-choice test.
- Maximum 35 points.
- Exam dates will be available in IS shortly.

Projects

- Not as easy as homeworks and exam :-)
- Aim is to work on a code written by someone else.
 - Fix a bug.
 - Add a feature.
 - Port an application to Mono.
- Propose a project by yourself.
- Must be approved by V48.
- For large projects, you may work in groups.
- Some ideas for projects can be found in IS.
- Maximum 45 points.

To pass the course, you need 50 out of $20+35+45=100$ points.

Learning materials

- Basic references are listed in the IS (some of them available in the faculty library).
- Slides refer to (mostly) online materials (references summarised at the end of each presentation) – recommended reading
- References, sample code, slides and supplementary material available via the IS.
- Books available in the faculty library:
 - B. Abrams: C# .NET Framework Library Annotated Standard
 - J. Bishop: C# Concisely
 - J. Miller: CLI Annotated Standard
 - A. Hejlsberg: The C# Programming Language
 - J. Richter: Applied .NET Framework Programming
 - ...

Consultations, Contacts

- No fixed consultation hours (write an e-mail to arrange consultation).
- Using discussion forums in the IS is encouraged.
- E-mail (give us some time for reply).
- Contact information is publicly available in the IS.
- Try to contact V48 first.

Questions

Any questions so far?