



Faculty of Health, Science and Technology
Computer Science

Syllabus

C#.NET

Course Code:	DVGB07
Course Title:	C#.NET <i>C#.NET</i>
Credits:	7.5
Degree Level:	Undergraduate level
Progressive Specialisation:	First cycle, has less than 60 credits in first-cycle course/s as entry requirements (G1F)

Major Field of Study:
DVA (Computer Science)

Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2023-08-28, and is valid from the Spring semester 2024 at Karlstad University.

Prerequisites

Software Development Methodology (7.5 ECTS credits) or Software Development (7.5 ECTS credits), or equivalent

Or employer selected (when this course is offered as contract education)

Learning Outcomes

Upon completion of the course, students should be able to:

- design and implement programs with graphical user interface in C#, using an integrated software development environment,
- explain event-driven programming in C#,
- manage files with different formats in C#,
- implement basic LINQ questions for computer access,
- use design patterns to design programs and to reuse classes in C#, and

- describe the .NET-architecture.

Content

For the most part, the course is practical in nature, giving the students the opportunity to develop major programming tasks in C#.NET. The primary focus of the course is on C# and the secondary focus is .NET technology and structure. The course also provides

- an introduction to .NET architecture
- compilation and execution of C# programs
- using an integrated software development environment for C#
- C# as a programming language: type of language, application area, comparison with similar languages
- basic syntax: data types, syntax rules, operators, error handling (exceptions)
- object-orientation: classes, object, interface, abstract classes, inheritance, polymorphism
- graphical user interface: design patterns such as Model-View-Controller
- form programming and controls
- event management, delegates
- class library for collections, file management, document and text management (e.g. XML)
- data access with LINQ.

Reading List

See separate document.

Examination

Assessment is based on laboratory assignments, submitted in the form of lab reports and a final individual oral exam.

If students have a decision from Karlstad University entitling them to Targeted Study Support due to a documented disability, the examiner has the right to give such students an adapted examination or to examine them in a different manner.

Grades

One of the grades Distinction (5), Some Distinction (4), Pass (3), or Fail is awarded in the examination of the course.

Quality Assurance

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course evaluation is partly based on student views and experiences obtained in accordance with current regulations and partly on other data and documentation. Students will be informed of the result of the evaluation and of any measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional information

The local regulations for studies at the Bachelor and Master levels at Karlstad University stipulate the obligations and rights of students and staff.