



Faculty of Arts and Social Science  
Information Systems

## Syllabus

### Introduction to object-oriented programming

<b>Course Code:</b>	ISGB18
<b>Course Title:</b>	Introduction to object-oriented programming <i>Introduction to object-oriented programming</i>
<b>Credits:</b>	5
<b>Degree Level:</b>	Undergraduate level
<b>Progressive Specialisation:</b>	First cycle, has less than 60 credits in first-cycle course/s as entry requirements (G1F)

**Major Field of Study:**  
IKA (Information Systems)

#### Course Approval

The syllabus was approved by the Faculty of Arts and Social Science 2015-03-07, and is valid from the Spring semester 2015 at Karlstad University.

#### Prerequisites

Information systems 30 ECTS cr, including the course ISGA04 Basic programming 7.5 ECTS cr, or equivalent

#### Learning Outcomes

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

- give an account of the central theories and methods of object-oriented program development,
- apply object-oriented programming,
- deal with exceptions,
- create graphical programs with event handling,
- apply good semantics by giving an account of heritage, polymorphism, data encapsulation and data abstraction in a relevant way in relation to the object-oriented design paradigm, and
- analyse and evaluate program code in regard to design and semantics.

#### Content

The course builds on ISGA04 Basic programming 7.5 ECTS cr and includes components such as exceptions, event handling and graphical components. The course is based on object-oriented analysis and design, where basic concepts such as object, class, encapsulation, method, attribute, heritage, polymorphism and constructors are some elements treated. Methods of constructing graphical user interface are treated. Concepts such as components and events for creating user interfaces are discussed. Students practice constructing user interfaces in a object-oriented programming language.

Instruction is in the form of lectures and laboratory supervision.

**Reading List**

See separate document.

**Examination**

Assessment is based on a written exam.

**Grades**

One of the grades Distinction (VG), Pass (G), or Fail (U) 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's and Master's levels at Karlstad University stipulate the obligations and rights of students and staff.

The course ISGB18 cannot be included in the same degree programme as ISGB08, 7.5 ECTS cr