



Faculty of Health, Science and Technology
Computer Science

Syllabus

Applied Systems Integration

Course Code:	DVGA25
Course Title:	Applied Systems Integration <i>Tillämpad systemintegration</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 2024-09-06, and is valid from the Spring semester 2025 at Karlstad University.

Prerequisites

Registered for Programming Techniques, 7.5 ECTS credits, and Software Development Methodology, 7.5 ECTS credits, or equivalent

Learning Outcomes

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

- describe basic concepts related to systems integration and the techniques used,
- describe master data and its significance for systems integration,
- analyse and design integrations based on operational requirements and technical conditions,
- develop interfaces (endpoints) for applications using various file and communication formats, and
- develop, document, and monitor integrations for scenarios involving several applications integrated with a modern integration platform.

Content

The course treats basic systems integration concepts and the analysis, design, and development of integrations for data exchanges between systems using a central integration platform. Techniques for documenting integrations and monitoring the integration platform are also described.

Concepts and techniques covered in the course include the following:

- Integration formats such as XML files, flat files, export tables, and web services (REST APIs)
- Key concepts for systems integration, such as application integration, data integration, B2B integration, and master data
- Techniques for monitoring and documenting integrations
- Analysis, design, and development of endpoints and integrations

Reading List

See separate document.

Examination

Assessment is based on laboratory tasks completed in groups and a written 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 5 (Pass with Distinction), 4 (Some Distinction), 3 (Pass) or U (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.