

Dette er en oversettelse av den fastsatte læreplanteksten. Læreplanen er fastsatt på Bokmål

Laid down as a regulation by the Norwegian Directorate for Education and Training on 11 January 2007 as delegated in a letter of 26 September 2005 from the Ministry of Education and Research pursuant to the Act of 17 July 1998 no. 61 relating to primary and secondary education (Education Act) Section 3-4 first paragraph.

Valid from 01.08.2007

Valid to 31.07.2018



Utgått

## Purpose

The blacksmith represents one of the world's oldest trades, and blacksmithing is part of our cultural heritage. The blacksmithing course shall cover the market's needs for forged handwork products and minor repairs, maintenance and restoration. The programme subjects shall form the basis for innovation and use of traditional forging skills, and help to take care of society's needs for qualified blacksmiths.

Teaching shall provide experience with the malleable working of steel and development of the production of forge iron products based on traditional and more modern production processes. Teaching shall provide the basis for the development of trade skills and an understanding of the interaction between quality, form and function. The programme subjects shall help develop conscious attitudes to new technology, market mechanisms, use of resources and environment, health and safety.

In the teaching, weight shall be given to practical work with steel materials. The teaching shall take as a point of departure the requirements set for professional vocational practice.

## Structure

The programme area for Blacksmith consists of two programme subjects. The programme subjects complement each other, and should be viewed in relation to one another.

### Overview of the programme subjects:

| Year level | Programme subject |                                |
|------------|-------------------|--------------------------------|
| Vg2        | Blacksmithing     | Design and product development |

## Description of the programme subjects

The programme subject deals with the rudiments of producing forged products. It involves the development of trade skills in work with different forging materials, techniques and joining methods. Knowledge about different steel and metal types used in a forge is included. Presentation and documentation using digital tools is included as part of quality assuring one's work and competence. The programme subject deals with regulations relevant to health, environment and safety.

The programme subject deals with the entire process from concept to finished product. It includes preparing sketches and drawings as well as the production of auxiliary tools and forging of test products. The relationship between form, scale, material choice and the forged products' function are central aspects. The programme subject also includes the planning, organization and documentation of the production process with the help of digital tools. Knowledge of the market and the relationship between demand, price and quality are elements in the programme subject.

## Teaching hours

Teaching hours are given in 60-minute units.

Vg2

Blacksmithing 337 teaching hours per year

Design and product development 140 teaching hours per year

## Basic skills

Basic skills are integrated into the competence aims for this course in areas where they contribute to the development of and are part of the subject competence. In Blacksmithing, basic skills are understood as follows:

*Being able to express oneself orally and in writing* in Blacksmithing involves expressing oneself visually and orally about forging work and different work processes. It involves the use of technical expressions and participating in technical discussions.

*Being able to read* in Blacksmithing involves understanding on reflecting on relevant trade literature. It also involves interpreting and using written and visual language, working drawings and specifications with drawings and symbols.

*Numeracy* in Blacksmithing involves calculating weight, volume, quantity, angles, dimensions, relative strength and time. It also involves the analysis and construction of shapes, structures, proportions and compositions.

*Digital literacy* in Blacksmithing involves retrieving information, experimenting with shapes and composition, and documenting one's work and competence.

## Competence aims

*The aims of the studies are to enable pupils to*

- perform all-round heating processes and forging techniques
- elaborate on the structure, qualities and areas of use for steel and metals associated with blacksmithing
- forge-weld and master different modern welding methods with selection of solder and flux for different types of steel, forging techniques and relative strength
- master different material joining methods and scaling of their own forging work
- use and maintenance of machine hammers, hand tools, machines and equipment
- explain blacksmithing's artistic-historic development and use an understanding of aesthetics in their own work
- elaborate on the foundation and installation of machines, tools and equipment for their own forging work
- use digital tools to document and present their own forging work
- keep the workplace in order and take care of regulations relevant to environment, health and safety

*The aims of the studies are to enable pupils to*

- design their own forge products

- experiment with form and composition in their own forge products
- produce sketches and use technical drawings in blacksmithing
- choose and scale materials with the forge products' functions as a point of departure
- systemize and plan their own smithcraft
- produce auxiliary tools in blacksmithing
- use digital tools in the product development process
- market products and services in blacksmithing, with price and quality

## Assessment

### Vg2 Blacksmith

Provisions for final assessment:

#### *Overall achievement marks*

| Programme subject                               | Provisions  |
|---|---|
| Blacksmithing<br>Design and product development | The pupil shall have an overall achievement mark in each programme subject. |

#### *Examination for pupils*

| Programme subject                               | Provisions   |
|---|--|
| Blacksmithing<br>Design and product development | The pupil shall take an interdisciplinary practical examination covering the common programme subjects.<br>The examination is prepared and graded locally. |

#### *Examination for external candidates*

| Programme subject                               | Provisions   |
|---|--|
| Blacksmithing<br>Design and product development | The external candidate shall take a written examination in each programme subject.<br>The external candidate shall also take an interdisciplinary practical examination covering the common programme subjects.<br>The examination is prepared and graded locally. |

The provisions for assessment are stipulated in the regulations of the Norwegian Education Act.