

## **Natural resource use**

Natural resource use covers different activities for the production of goods and services. Practical experience and research in the natural sciences has contributed and contributes to developing the methods and tools of natural resources use. The subject natural resource use provides an introduction to working environments with plants, animals, nature and forests, and also professions in these areas. In order to gain a better understanding of natural resource use today, and its role in sustainable development, the subject also covers the historical development of natural resource use.

### **Aim of the subject**

Teaching in the subject of natural resource use should aim at helping students develop knowledge of different environments and industries in natural resource use, their conditions and how natural resources can promote sustainable development.

Teaching should lead to students developing the ability to carry out practical tasks in different areas of natural resource use. By means of teaching, students should be given the opportunity to develop confidence in their own work skills, and also develop the ability to solve problems and cooperate with others. Knowledge of the working environment and safety issues should be a part of the teaching. Students should also be given opportunities to develop basic skills in operating basic machines in natural resource use.

By means of contacts with different working environments in natural resource use, teaching should give students the opportunity to develop their understanding of the role of the use of natural resources in society. Teaching should also give students the opportunity to develop practical skills in carrying out tasks with plants, animals, nature or forests in a responsible way.

### **Teaching in the subject of natural resource use should give students the opportunities to develop the following:**

- 1) Knowledge of different working environments in natural resource use and its professional areas.
- 2) Knowledge of products and services in natural resources and about historical development in the area.
- 3) Knowledge of how natural resources are used in the area, and how this contributes to sustainable development.
- 4) The ability to carry out tasks in different areas in natural resource use.
- 5) The ability to work safely and in accordance with knowledge of laws and other regulations applicable to safety in their work.
- 6) Skills in operating basic machines in natural resource use.

## **Courses in the subject**

- Natural resource use, 200 credits.

## Natural resource use

The course, natural resources use, covers points 1–6 under the heading Aim of the subject.

### Core content

Teaching in the course should cover the following core content:

#### Introduction to activity areas in natural resource use

- Different professional areas and environments for using natural resources e.g. in agriculture, forestry, horticulture, stables and animal husbandry.
- Tasks involving handling plants or animals, and also documentation of completed tasks.
- Products and services in natural resource use, e.g. food, plant material, raw wood materials, energy raw materials, preservation of nature and landscape, and enjoyment of nature.
- Biological diversity in nature and its importance for sustainability in natural resource use.
- Use of resources in natural resource use and as a resource for sustainable development.
- Development in natural resources use from historical and global perspectives.
- Environmental measures in natural resource use, e.g. in connection with handling fertilisers, plant nutrition substances, use of machines, animal husbandry and silviculture.

#### Tasks

- Tasks in natural resources using hand tools and technical equipment.
- Knowledge of materials, choice of materials and use of materials when carrying out tasks.
- Maintenance of hand tools and technical equipment.
- Tasks based on manuals and instructions.
- Operating basic machines.

#### Working environment and safety issues

- Working environment and safety issues, and also protected work and protection rounds.
- First aid.
- Electrical work in accordance with laws and other regulations on electrical safety.
- Fire protection, fires and combating fires.
- Natural disasters e.g. floods, landslides and storms.
- Functional and safety controls in connection with the use of technical equipment.
- Ergonomy in relation to carrying out different tasks.
- Laws and other regulations applicable to safety at work.

## Knowledge requirements

### Grade E

Students give an account **in basic terms** of different professional areas in natural resource use and give examples of professions, tasks, products and services. Students also describe **in basic terms** the historical development of natural resource use. In addition, students give an account **in basic terms** of how natural resources are used and how this can contribute to promoting sustainable development.

Students follow work instructions and carry out **in consultation** with the supervisor **limited** tasks safely. Students use with **some** skills appropriate tools to carry out tasks. In their work, students take responsibility for machine assets and themselves, and keep the workplace well-organised. After the task has been completed, students draw up **simple** documentation of their work.

Students carry out **in consultation** with the supervisor practical fire safety measures, and give an account **in detail** of laws and other regulations governing fire protection and safety at work. Students carry out **after consultation** with the supervisor first aid in a simulated accident.

Students operate basic machines in a training area in a safe way. **In consultation** with the supervisor, students take readings, adjust instruments, and also adjust and use different control settings in basic machines. Students carry out **in consultation** with the supervisor functional and safety controls when using machines and tools.

In consultation with the supervisor, students assess **with some certainty** their own ability and the requirements of the situation.

### Grade D

Grade D means that the knowledge requirements for grade E and most of C are satisfied.

### Grade C

Students give an account **in detail** of different professional areas in natural resource use, and give examples of professions, tasks, products and services. Students describe also **in detail** the historical development of natural resource use. In addition, students give an account **in detail** of how natural resources are used and how this can contribute to sustainable development.

Students follow work instructions and carry out **after consultation** with the supervisor **general** tasks safely. Students **choose, and also** use with **good** skills appropriate tools to carry out tasks. In their work, students take responsibility for machine assets and themselves, and keep the workplace well-organised. After the task has been completed, students draw up **accurate** documentation of their work.

Students carry out **after consultation** with the supervisor practical fire safety methods, and give an account **in detail** of laws and other regulations governing fire protection and safety at work. Students carry out **after consultation** with the supervisor first aid in a simulated accident.

Students operate basic machines in a training area in a safe way **and with good planning**. **After consultation** with the supervisor, students read and adjust instruments, and also adjust and use different control settings in basic machines. Students carry out **after consultation** with the supervisor functional and safety controls when using machines and tools.

In consultation with the supervisor, students assess **with some certainty** their own ability and the requirements of the situation.

## **Grade B**

Grade B means that the knowledge requirements for grade C and most of A are satisfied.

## **Grade A**

Students give an account **in detail and in a balanced way** of different professional areas in natural resource use and give examples of professions, tasks, products and services. Students describe also **in detail** the historical development of natural resource use. In addition, students give an account **in detail** of how natural resources are used and how this can contribute to sustainable development.

Students follow work instructions and carry out **after consultation** with the supervisor **general** tasks safely. Students **choose, and also** use with **very good** skills appropriate tools to carry out tasks. In their work, students take responsibility for machine assets and themselves, and keep the workplace well-organised. After the task has been completed, students draw up **accurate and detailed** documentation of their work.

Students carry out **after consultation** with the supervisor practical fire safety methods, and give an account **in detail** of laws and other regulations governing fire protection and safety at work. Students carry out **after consultation** with the supervisor first aid in a simulated accident.

Students operate basic machines **using different operating techniques** in a training area in a safe way **and with very good planning**. **After consultation** with the supervisor, students read and adjust instruments, and also adjust and use different control settings in basic machines. Students carry out **after consultation** with the supervisor functional and safety controls when using machines and tools.

In consultation with the supervisor, students assess **with certainty** their own ability and the requirements of the situation.