

Austria (High School) Curriculum Standards (D-ECO)

The presentations offered by The Educated Choices Program provide support for teaching and learning of the following standards:

Data Processing for Economics, grades 9-12		Environment and Modern Agriculture	Healthful Eating
Grades 9-12	The computer science of the Wirtschaftskundliches Realgymnasium connects to the compulsory subject of the 1st semester and is intended to lead the students to an extended and in-depth computer education. • This includes factual and subject systematic as well as methodical and social components. Taking into account the scientific systematics, the lessons should lead to goal-oriented, constructive problem-solving with IT tools and methods. • Computer science should contribute to the training of abstract thinking through a precise, structured and complete description of both problems and processes, as well as through the modularization and decomposition of complex tasks. • Ultimately, the economics Realgymnasium should lead to a deeper technical and socio-cultural understanding of our digitally shaped world and prepare interested students for a relevant course of study. Competencies The competency model for computer science is divided into four areas in the content dimension and three areas in the action dimension.		



- The competences were formulated at the intersection of content and action areas and divided between the individual semesters.
- The lessons should lead to a deepening and expansion of competencies in the sense of a consistent development of competencies in all areas.
- The degree of abstraction and the acquisition of conceptual understanding should be increased in the course of the ascending semesters.

Outline of the content dimension

- Informatics, people and society
- Computer systems
- Applied Computer Science
- Practical Computer Science

Structure of the action dimension

- Knowledge and understanding
- Application and design
- Reflection and evaluation

The requirements from the action dimension can be assigned to the aspects of reproduction, transfer, reflection and problem solving with regard to the oral matriculation examination.

It is up to the teachers, in coordination with the students, to set priorities in certain areas or to treat areas as examples.

7th semester – competence module 2
Information technology, people and society
Responsibility, data protection and data security

 Be able to ensure the protection and security of the IT systems with which one works



- Describe personal rights and obligations in the use of IT systems and be able to explain essential aspects of data protection and data security
- When using IT systems, be able to responsibly apply knowledge of obligations and rights in relation to oneself and their work environment, to personal and third-party data

History of computer science

- Describe milestones in the development of computer technology and be able to name the key personalities behind them
- Relate historical knowledge to the current situation and, if necessary, be able to derive possible future scenarios
- Being able to differentiate between short-lived hardware and software products and long-lasting principles based on the development of IT

Computer systems

Technical basics and functionality

- Describe components of IT systems and be able to explain how they work and how they interact
- Be able to evaluate different digital end devices or IT systems with regard to their technical properties and their performance
- Be able to diagnose and fix simple errors

Operating systems and software

- Describe and explain the core tasks and working methods of operating systems
- Name categories of software and describe their application networks
- Describe networks and their protocols and explain how they function and work



 Name various internet services and be able to describe and explain their possible uses and functions. Various Internet services can use

Applied Computer Science

Production of digital media

- Be able to describe common media formats and their properties.
- Be able to explain basic guidelines relevant to the production of digital media
- Be able to edit and produce digital media in the form of text, sound, images and films and also publish them on the web. Being able to assess and evaluate digital products (artifacts) in terms of content relevance, effect and design

Communication and cooperation

- Name important web applications for information exchange and collaboration and be able to explain their basics
- Use networks with appropriate web applications to exchange information, discuss and collaborate in a meaningful and responsible manner
- Being able to evaluate the situation-specific use of communication and cooperation systems and reflecting on their importance for me and society

Calculation models and visualization

- Be able to explain the (computer) function concept
- Design and implement calculation models to solve problems
- Reflect on the correctness of calculation models and calculation methods and being able to examine alternatives
- Be able to name basic concepts of structured and tabular data and operations as well as to be able to evaluate databases with the appropriate software and visualize them according to the requirements
- Evaluate variants of visualizations



Practical Computer Science

Algorithms, data structures and programming

- Explain the concept of algorithms
- Be able to describe basic tasks and problems algorithmically and formally in suitable data structures
- Design basic algorithms, represent them formally, implement them and test them
- Name aspects of procedural, functional and object-oriented programming and be able to explain them using examples
- Assess the efficiency of algorithms
- Search specifically for program errors and correct them

8th semester – competence module 3

Information technology, people and society

Career prospects

- Being able to name occupational fields in which the application of IT plays an important role and being able to categorize the variety of IT occupations
- Being able to use one's own knowledge and school experiences in connection with IT for one's own future employment biography
- Classify the economic importance of IT in the various occupational fields and be able to estimate the opportunities of IT occupations

Importance of computer science in society

- Be able to apply and use knowledge about IT systems in the digital private and school environment in a targeted manner
- Assess the influence of IT systems on everyday life, on society and the economy and be able to weigh up the advantages and disadvantages using concrete examples

Applied Computer Science



Search, selection and organization of information

- Be able to search for and select information and media in a targeted manner using suitable services and offers and choosing suitable search methods.
- Be able to assess and evaluate information in terms of its relevance and quality.
- Able to assess adequate tools and methods of data and information organization.

Practical Computer Science

Data models and database systems

- Describe the term database and other important technical terms in this context and be able to explain them using examples
- Explain database models, tables and their relationship patterns, and other database objects
- Capture, query and evaluate data in a structured way (in tables), modeling databases and developing simple automated database solutions
- Be able to evaluate data models in terms of data types, redundancy, integrity and relevance



Data Processing for Gymnasium, grades 9-12		Environment and Modern Agriculture	Healthful Eating
Grades 9-12	Educational goals and educational content are always a reflection of the social, political and economic environment. Computer science is currently the essence of the digital age and thus also the foundation of modern information and communication technologies. Its content is therefore general and serves both a well-founded understanding of the world and the professional basis for future job descriptions. Computer science plays a key role as a science and as a school subject, since it deals with automatic data processing and digital information representation and makes them usable with the help of computer systems. Computer science gives all students equal access to IT ways of thinking and working as a prerequisite for productive use of digital information and communication technologies. Language and communication Constructive computer science lessons are also language lessons. In contrast to natural languages, human-machine communication is based on an abstract formal language. IT systems make a significant contribution to changes in communication culture. Different digital forms of representation of information complement traditional communication and require new technological and methodological skills. The diverse possibilities of electronic communication enable an exchange across borders and facilitate virtual encounters with other cultures.		



 The resulting motivation to acquire foreign language skills is reinforced by the availability of up-to-date and authentic foreign language information and specialist vocabulary.

People & Society

The world of work and the private environment of people are constantly changing due to the influence of information technology.

- By working with these technologies, students learn about their effects, opportunities, limitations and dangers.
- The students recognize the potential of their own abilities as thinking, acting, feeling and developing human beings in contrast to a learning machine.
- This requires responsible use of information technology.

Nature and technology

 Through modeling, formalization and abstraction, computer science makes a significant contribution to dealing with nature and technology and leads to better decision-making and action competence.

Creativity and design

 Dealing with information technology gives the students the opportunity to be creative themselves and to gain design experience.

Health and movement

- Responsibility for one's own body requires targeted exercise to compensate for working on the computer.
- The students should become aware of the importance of an ergonomically designed workplace.
- The use of information technologies to collect and analyze data in the sports and health sector offers the opportunity for critical reflection.

Computer science education is the result of learning processes in which technical basics are made clear and application skills are systematically acquired through planned working methods.



- It enables students to grasp the social and economic dimensions of digital information and communication technologies.
- The task of computer science teaching is to guide students to acquire computer and information technology skills in order to enable them to use them to solve various problems.
- By analyzing real problems, especially from their world of experience, they should recognize structures and connections and experience the need for abstraction and reduction in the modeling of simple real systems and learn to apply these models to empirical data.
- They should learn to apply cooperative and communicative working methods using communication technologies.
- In all areas of education, the focus is on expanding and consolidating material, personal and social skills.

The students should recognize that computer science is subject to scientific systematics and deserves interest and appreciation.

- Informatics instruction summarizes and develops students' existing skills in informatics through engagement with the design, design and application of information systems.
- The students should use their cognitive, emotional and creative potential when critically examining the processes involved and their results.
- This should support the students in developing and consolidating a
 personal value system and world view and enable a deeper insight
 into the social context and effects of modern information technology.

1st semester - competence module 1

Informatics, people and society



- Describe the importance of computer science in society, assess the effects on individuals and society and weigh up the advantages and disadvantages using specific examples
- Know and be able to apply measures and legal bases in connection with data security, data protection and copyright
- Describe and evaluate the development of computer science
- Being able to name and assess IT professions and possible uses of IT in various professional fields

Computer systems

- Being able to describe and explain the structure of digital end devices
- Explain how computer systems work
- Explain the basics of operating systems, be able to use a graphical interface and utilities
- Describe the basics of computer networking and be able to use local and global computer networks

Applied Computer Science

- Be able to use standard software for communication and documentation as well as for the creation, publication and multimedia presentation of your own work
- Be able to use standard software for calculations and visualization
- Accessing sources of information, systematizing, structuring, evaluating and processing content and being able to use different information representations
- Be able to use digital systems for information exchange, to support the organization of lessons and for learning, also in communicative and cooperative forms

Practical Computer Science

 Understand terms and concepts of computer science and be able to apply methods and working methods



Economics, grades 9-12		Environment and Modern Agriculture	Healthful Eating
Grades 9-12	The type-forming compulsory subject at the Wirtschaftskundliches Realgymnasium is a multidisciplinary subject whose subject areas combine personal experience with everyday reference and social relevance. • Economics lessons are intended to convey the following values: • health-promoting awareness and action, • the importance of an intact environment, • sustainable management. • Students should be able to follow the (e.g. media) explanations of experts and to question them. • Due to the content (professional competence) and methods, competences are promoted that are useful for developing or expanding both personal and professional perspectives. • Based on the central importance of the household, which is to be understood in its entirety as a supply, economic and social area, students should be motivated to take on needs-based, independent and efficient management. • The aim is to reflect on living and eating habits in order to bring about health-promoting and environmentally conscious action in terms of prevention and sustainability. • The teaching of the basics of consumer law, forms of financial investment, market and advertising strategies as well as product		



labeling should support the development of students into responsible consumers.

- The use of modern information technologies aims at communication, presentation and media competence.
 - Self-competence is promoted by analyzing and reflecting on one's own living, eating and consumption habits in the classroom and thus leads to improved health and financial management.
- The sensitization for social and economic problems, understanding for the difficulties of world nutrition and the development of problem-solving strategies should lead students from their own experience to global thinking and increase their social skills.

Language and communication

- Through the reflective examination of the students' own immediate areas of life as well as through clarity, practical orientation and diverse use of media, the linguistic handling of everyday experiences is made possible and thus communication skills are promoted.
 - Dealing with health-related, economic and ecological topics should enable students to question, discuss and evaluate statements by experts.

People & Society

- Economics is intended to lead students to reflected knowledge of their own living and consumption habits and to promote an understanding of the different forms of social coexistence in the service of equal opportunities and gender equality.
 - Other topics can be attributed to this area of education: economic area of the private household in connection with economic connections;



- Existence and change of family structures and challenges in the area of gender-equitable division of labor, also in international comparison;
- Reflection on living together in private households as the basis of social relationships;
- Assuming responsibility as a consumer;
- Experience of cultural and intercultural differentiation of lifestyles and diets as well as traditions, taboos and preferences;

Nature and technology

- Man's responsibility for his living environment and opportunities to actively shape it is reflected in a wide range of content:
 - Recognize connections between economy and ecology;
 - Reflection and evaluation of own environmentally relevant actions;
 - Use of innovative household technology;
 - Multimedia documentation and presentations with a special focus on information technology

Health and movement

The health-related area is evident in economics as an important focus. The focus is on health literacy:

- Maintaining health and performance;
- Nutrition for healthy people and target group-oriented nutrition; practical application of nutritional knowledge;
- Insights into the areas of hygiene and microbiology; accident prevention and first aid;
- Reflection on work processes and ergonomic design of the workplace, living area and living environment;
- Significance of housing for health and ability to perform;



 Critical examination of body norms and stereotypes (e.g. ideals of beauty) that affect health

Creativity and design

The creative and formative possibilities in economics promote self-realization and social responsibility and have an individually enriching and community-building effect.

- Creative areas are in particular:
 - Living and working space design;
 - Menu design, food preparation, food culture;
 - Sensory experiments;
 - Aesthetic and culinary product design and marketing concepts;
 - Encouraging creative problem-solving strategies

Modern, competency- and action-oriented teaching is intended to promote the independence of the students.

- The subject, social, decision-making and action skills of the learners must be the focus of the teaching process in order to be able to orientate themselves in everyday life.
- The paradigm shift from content- and object-centered (input control) to competence-based teaching (output orientation) must be completed.

The lessons should be based on scientific, cultural and social science findings and be based on the principles of

- Salutogenetic health promotion,
- Sustainability and the active participation of citizens in society and thus offer a basis for decision-making for a healthy, environmentally friendly and socially acceptable lifestyle.
- The learning process must be organized in the areas of technical, methodological, personal and social skills.



The competence-oriented formulated educational and teaching task represents binding teaching and learning goals in connection with the subject matter.

- Based on the experience of the students, the content is to be conveyed in an age-appropriate manner.
- The individuality of the learners must be taken into account when planning and designing the lessons.
- Methods that support self-reliance, personal responsibility and the ability to work in a team, such as exemplary case studies, role-playing and business games, projects, internet research, presentations and open forms of learning, are particularly suitable.
- When using the respective method, attention should be paid to clarity, practical orientation and topicality.
- Interdisciplinary teaching promotes networked thinking and transfer skills among students.

The involvement of experts from outside the school and the organization of excursions and training trips open up new perspectives, create direct connections and have a motivating effect due to their reference to reality. Diverse use of media has the ability to communicate, to promote topicality and interactive debate. Structured, logical and networked thinking and working should be strengthened by working with nutritional and household science sources.

The orientation of the teaching to the current state of science requires that the teachers continue to develop their technical and methodical-didactical knowledge and skills.



Competence model for economics

- The lessons promote self-competence through analysis and reflection on one's own living, eating and consumption habits and thus lead to improved health and financial management.
- It also contributes to the understanding of fundamental relationships in business/household, economic and global economic areas as well as knowledge of macroeconomic laws.

Superordinate cross-semester areas of competence

- Developing awareness of one's own consumption behavior, obtaining consumption-specific information and evaluating it according to quality criteria
- Recognizing, reflecting on and incorporating the concept of consumer citizenship into decisions, increasing the ability to critically assess the political, economic and social information disseminated by the mass media. Critically examining the personal role as a consumer in economic life and recognizing the economic significance of consumer behavior, understanding basic relationships in business/household, national and global economic areas as well as knowledge of macroeconomic laws, structures and problems, recognizing economic policy as an essential part of politics, be able to assess their models and their real implementation in different systems, acquisition of basic knowledge of different forms of investment (e.g. savings-provision models)
- Recognizing, reflecting on and evaluating one's own eating habits and understanding the connections between eating habits, cultures, health and well-being and performance, eating wholesomely and sustainably



- Obtaining, analyzing and presenting economic information in a target group-oriented manner using proven and up-to-date methods.
- Using and evaluating graphically prepared materials.
- Gaining insight into the causal structure and the dynamics of economy and ecology as well as into the underlying power structures
- Understanding ecological connections, recognize the importance of the perception and evaluation of the environment in the broadest sense for human action. Knowledge of the problems of environmental protection and recognition of the global responsibility for the "one world", managing resources responsibly

7th semester – competence module 1

Developing awareness of one's own consumption behavior, obtaining consumption-specific information and evaluating it according to quality criteria

- Explain the economic, cultural and social significance of the household, recognize and evaluate connections between consumption habits and health, and recognize and reflect on socio-cultural influences on one's own consumption habits
- Procure consumption-related information for shopping and evaluate it according to differentiated points of view, as well as recognize and observe safety instructions
- Explain the impact of food preparation on various aspects of food quality

Manage resources responsibly

- Understand the private household as a reproductive and socio-economic system and establish a connection between consumption and resource consumption
- Describe the variety of resources (time, money, goods, environment, labor) for private households and recognize the mutual influences on society and the economy and understand them using examples



- Recognize and reflect on the concept of consumer citizenship and incorporating it into decisions
- Orient themselves to the market and position themselves as responsible consumers with regard to sustainability, economic efficiency and ethical principles
- Know important legal regulations of consumer law, apply them to selected examples and be able to argue

Recognizing, reflecting on and evaluating one's own eating habits and understanding the connections between eating habits, cultures, health and well-being

- Name eating habits related to tradition, culture and religion
- Describe connections between eating habits and health and discuss responsible behavior with regard to social, psychological and physical well-being
- Calculate your own energy and nutrient requirements
- Eat wholesome and sustainable food
- Explain the basics of nutrition and show scientifically based connections between nutrition and health
- Describe energy-supplying ingredients in food and know and critically assess nutritional recommendations
- Name foods that provide energy and their properties and transfer their influence on preparation, preservation, storage and hygiene. Explain low-energy ingredients in food

8th semester – competence module 2

Developing awareness of one's own consumption behavior, obtaining consumption-specific information and evaluating it according to quality criteria

 Differentiate marketing measures from product information and describe sales channels



- Name and assess quality criteria for the sustainability and health of products and services and derive rebound effects based on selected product groups. Establish connections between consumption habits and health and, if necessary, derive a target group-oriented diet
 Manage resources responsibly
 - Outline strategies for short, medium and long-term financial management in private households
 - Recognize the need for active participation in the market and establish a connection between consumption and resource consumption, develop optimal purchasing planning and appropriate stock management based on adequate storage and preservation methods
 - Recognizing the global context of world nutrition and water as a scarce commodity and reflecting on their importance for one's own consumption When choosing food and dishes, pay attention to regionality and seasonality as well as processing and value
 - Explain the importance of organizational and ergonomic as well as hygienic and health aspects of work processes and plan and organize work processes in private households

Recognizing and reflecting on the concept of consumer citizenship and incorporating it into decisions

- Recognize environmentally relevant factors and their regional and global effects and a sustainable ie. develop an economically, ecologically, socially and health compatible lifestyle
- Recognize and evaluate the legal, economic and social significance of housing and comment on the connection between nutrition and health according to the WHO
- Recognize and reflect on an economically, ecologically, socially and health-friendly lifestyle name the legal basis for food labeling



- Know quality criteria of food and make quality-oriented nutrition and consumption decisions
- Develop an understanding of basic relationships in business/household, economic and world economic areas as well as knowledge of macroeconomic laws, structures and problems, recognizing economic policy as an essential part of politics, being able to assess their models and their real implementation in different systems, acquiring basic knowledge of different forms of investment (e.g savings pension models)

Eat wholesome and sustainable food

- Design nutritional situations in different contexts of meaning and include alternative forms of nutrition
- Assess health-related information from different sources Evaluate nutritional protocols, nutritional surveys, case studies and nutritional sources
- Explain sustainable and health-promoting criteria of products and forms of nutrition
- Creating and evaluating quality awareness
- Perceive and describe sociocultural and sensory influences on their own eating habits know and reflect on nutritional trends and eating traditions of different cultures
- Describe the production, processing and value of selected low-energy foods, name their properties and transfer their influence on preparation, preservation, storage and hygiene
- Argue for sustainable food choices
- Show scientifically based connections between nutrition and metabolism as well as nutrition and nutrition-related diseases

7th semester – competence module 1



Developing awareness of one's own consumption behavior, obtaining consumption-specific information and evaluating it according to quality criteria

- Explain the economic, cultural and social significance of the household, recognize and evaluate connections between consumption habits and health, and recognize and reflect on socio-cultural influences on one's own consumption habits
- Procure consumption-related information for shopping and evaluate it according to differentiated points of view, as well as recognize and observe safety instructions
- Explain the impact of food preparation on various aspects of food quality

Manage resources responsibly

- Understand the private household as a reproductive and socio-economic system and establish a connection between consumption and resource consumption
- Describe the variety of resources (time, money, goods, environment, labor) for private households and recognize the mutual influences on society and the economy and understand them using examples
- Recognizing and reflecting on the concept of consumer citizenship and incorporating it into decisions
- Orient themselves to the market and position themselves as responsible consumers with regard to sustainability, economic efficiency and ethical principles
- Know important legal regulations of consumer law, apply them to selected examples and be able to argue

Recognizing, reflecting on and evaluating one's own eating habits and understanding the connections between eating habits, cultures, health and well-being

• Name eating habits related to tradition, culture and religion



- Describe connections between eating habits and health and discuss responsible behavior with regard to social, psychological and physical well-being
- Calculate your own energy and nutrient requirements
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- Explain the basics of nutrition and show scientifically based connections between nutrition and health
- Escribe energy-supplying ingredients in food and know and critically assess nutritional recommendations
- Name foods that provide energy and their properties and transfer their influence on preparation, preservation, storage and hygiene.
 - Explain low-energy ingredients in food

8th semester – competence module 2

Developing awareness of one's own consumption behavior, obtaining consumption-specific information and evaluating it according to quality criteria

- Differentiate marketing measures from product information and describe sales channels
- Name and assess quality criteria for the sustainability and health of products and services and derive rebound effects based on selected product groups. Establish connections between consumption habits and health and, if necessary, derive a target group-oriented diet

Manage resources responsibly

- Outline strategies for short, medium and long-term financial management in private households
- Recognize the need for active participation in the market and establish a connection between consumption and resource consumption, develop optimal purchasing planning and appropriate stock management based on adequate storage and preservation methods



- Recognize the global context of world nutrition and water as a scarce commodity and reflecting on their importance for one's own consumption When choosing food and dishes, pay attention to regionality and seasonality as well as processing and value
- Explain the importance of organizational and ergonomic as well as hygienic and health aspects of work processes and plan and organize work processes in private households

Recognizing and reflecting on the concept of consumer citizenship and incorporating it into decisions

- Recognize environmentally relevant factors and their regional and global effects and a sustainable ie. develop an economically, ecologically, socially and health compatible lifestyle
- Recognize and evaluate the legal, economic and social significance of housing and comment on the connection between nutrition and health according to the WHO
- Recognize and reflect on an economically, ecologically, socially and health-friendly lifestyle name the legal basis for food labeling
- Rnow quality criteria of food and make quality-oriented nutrition and consumption decisions
- Understanding of basic relationships in business/household, economic and world economic areas as well as knowledge of macroeconomic laws, structures and problems, recognizing economic policy as an essential part of politics, being able to assess their models and their real implementation in different systems, acquiring basic knowledge of different forms of investment (e.g savings pension models)

Eat wholesome and sustainable food

 Design nutritional situations in different contexts of meaning and include alternative forms of nutrition



•	Assess health-related information from different sources Evaluate
	nutritional protocols, nutritional surveys, case studies and nutritional
	sources

- Explain sustainable and health-promoting criteria of products and forms of nutrition
- Create and evaluate quality awareness
- Perceive and describe sociocultural and sensory influences on their own eating habits know and reflect on nutritional trends and eating traditions of different cultures
- Describe the production, processing and value of selected low-energy foods, name their properties and transfer their influence on preparation, preservation, storage and hygiene
- Argue for sustainable food choices
- Show scientifically based connections between nutrition and metabolism as well as nutrition and nutrition-related diseases

