



European Schools

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## **ICTC Syllabus – S1 – S3**

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**APPROVED BY THE JOINT TEACHING COMMITTEE ON 13 AND 14 FEBRUARY  
2014 IN BRUSSELS**

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## 1. General Objectives of the European Schools

The European Schools have the two objectives of providing formal education and of encouraging pupils' personal development in a wider social and cultural context. Formal education involves the acquisition of competences – knowledge, skills and attitudes across a range of domains. Personal development takes place in a variety of spiritual, moral, social and cultural contexts. It involves an awareness of appropriate behaviour, an understanding of the environment in which pupils live, and a development of their individual identity.

These two objectives are nurtured in the context of an enhanced awareness of the richness of European culture. Awareness and experience of a shared European life should lead pupils towards a greater respect for the traditions of each individual country and region in Europe, while developing and preserving their own national identities.

The pupils of the European Schools are future citizens of Europe and the world. As such, they need a range of competences if they are to meet the challenges of a rapidly-changing world. In 2006 the European Council and European Parliament adopted a European Framework for Key Competences for Lifelong Learning. It identifies eight key competences which all individuals need for personal fulfilment and development, for active citizenship, for social inclusion and for employment:

1. communication in the mother tongue
2. communication in foreign languages
3. mathematical competence and basic competences in science and  
1. technology
4. digital competence
5. learning to learn
6. social and civic competences
7. sense of initiative and entrepreneurship
8. cultural awareness and expression

The European Schools' syllabuses seek to develop all of these key competences in the pupils.

## **2. Introduction:**

IT is possibly the fastest developing commodity in the last decades. Computers (in all shapes and sizes) and the Internet have acquired a very important role in most domains of our every day's life. In the same way, education is not imaginable anymore without a strong presence of IT tools and resources.

The European Schools ICT steering committee, throughout its latest ICT-plan, has proposed to create this working group in order to:

1. Update the secondary school ICT syllabus (2000-D-218) so as to integrate the very many developments in ICT in the last decade.
2. Establish a list of recommendations as how to integrate IT tools and resources in order to teach and learn in the most efficient way.

### **3. Didactic principles**

#### **3.1. General principles**

The secondary cycle of the European Schools needs to perform the dual task of providing formal, subject-based education and of encouraging pupils' personal development in a wider social and cultural context.

On one hand, formal education involves understanding concepts and processes. It aims at acquiring knowledge and skills in order to be able to apply what has been learnt within each subject area and across subjects.

On the other hand, pupils will learn to describe, analyse, interpret, have a critical view and apply their acquired knowledge and skills in a creative and original way in a wide range of social, scientific and cultural contexts.

Computer use involves questions of law, ethics and democracy, such as copyright, freedom of speech and freedom of information and people's right to privacy. For the future computer users will be required both a creative approach to computer technology for use and that awareness of legal and democratic aspects of the technology.

### 3.2. Subject-specific principles

Since the world of ICT is changing so rapidly, one of the two main goals of this new syllabus are, on one hand, to provide the pupils with the basic knowledge and fundamental skills and, on the other hand, to empower them to become independent and autonomous learners. In this sense, pupils should acquire a range of skills that will allow them to continue learning by themselves.

- The pupils will be able to use the information and communication technologies as tools to research, select, process and distribute information.
- The pupils will be able to critically differentiate the varying quality and sources of information. They will learn to use information in a respectful way, quote and refer to sources.
- The pupils understand the fundamental functionality of hard- and software.
- The pupils will be able to develop skills in how to continue to learn and how to apply themselves with new tools in ICT for solving problems in general.

This syllabus aims to improve the teaching of ICT because it's a guideline through the topics of the important present technologies and it will give a vision of future developments. To meet those aims it's important to update this syllabus regularly.

A very important issue of the ICT course is to provide the training students need to use new technologies in the daily school life which can't be included in other subjects!

## 4. Learning objectives

### 4.1. Year 1 and 2

At the end of year 2, the student should be able to:

- get to know and get comfortable with the computers and the schools ICT-environment
- use the operating system and the applications as tools
- work with files, folders and different storages
- use the most common software types like word processing, spread sheet and presentation tools
- use the internet as a source of knowledge and communication
- get to know the ethics, risks and chances of modern technologies

### 4.2 Year 3

At the end of year 3, the student should be able to:

- know more about ICT
- manipulate simple objects in computers
- learn the basics of web design and programming

In S3 ICT is an optional course. The aim of this course is to add some abilities for students who want to know more about ICT. The students will get to know how to manipulate simple objects in computers. So they will learn the basics of web design and programming.

## 5. Program for year 1 and 2 (32 periods per year)

<b>TOPIC</b> (number of periods is only a guideline)	<b>KNOWLEDGE &amp; SKILLS</b>	<b>POSSIBLE PEDAGOGICAL APPROACHES</b>
Getting started with the school ICT environment (2 periods)	<b>The student must be able to use:</b> <ul style="list-style-type: none"> <li>• Devices</li> <li>• The school network</li> <li>• Login and password</li> <li>• Email address</li> <li>• Personal file storage</li> </ul>	Show the different devices used in school (pc, tablet, printer, scanner, etc...) Explain the different part of the network (wifi, intranet, learning platforms)
Getting to know your operating system (2 periods)	<b>The student must be able to:</b> <ul style="list-style-type: none"> <li>• use input devices</li> <li>• Open/close windows</li> <li>• Manage Files and folders</li> <li>• Find and open standard applications</li> </ul>	
Internet (4 periods)	<b>The student must be able to:</b> <ul style="list-style-type: none"> <li>• Use and compare different browsers</li> <li>• How to navigate and search</li> <li>• Be aware of ethics, risks and security</li> <li>• Understand what is social networking</li> </ul>	Show difference between browsers Intelligent searching, organizing sources <b>Of course this needs to be integrated in every topic of the syllabus!!!</b>
Presentation tools (10 periods)	<b>The student must be able to:</b> <ul style="list-style-type: none"> <li>• Open/close the tool</li> <li>• Create the layout of a slide</li> <li>• Insert text</li> <li>• Insert graphical objects</li> <li>• Insert multimedia objects</li> <li>• Change animation and transition of slides</li> </ul>	Timelines, key cards, hand-out's,

	<ul style="list-style-type: none"> <li>• Prepare, rehearse and run a presentation</li> </ul>	practicing presentations, gestures and presence
Word processing (10 periods)	<p><b>The student must be able to:</b></p> <ul style="list-style-type: none"> <li>• Open and close the tool</li> <li>• Create/Save and organise a document.</li> <li>• Use tables</li> <li>• Format text</li> <li>• Format sections</li> <li>• Insert graphical objects</li> <li>• Use dictionary and thesaurus</li> <li>• Format/Print pages</li> </ul>	Only print out on paper when it's really necessary!!! (Use print preview, page layout, print to PDF instead)
Spread sheets (6 periods)	<p><b>The student must be able to:</b></p> <ul style="list-style-type: none"> <li>• Open and close the tool</li> <li>• Understand the terminology of spread sheets</li> <li>• Perform simple calculations</li> <li>• Use simple functions</li> <li>• Format tables</li> <li>• Simple diagrams</li> </ul>	(cell, column, row, address, ...)
Multimedia (10 periods)	<p><b>The student must be able to:</b></p> <ul style="list-style-type: none"> <li>• Edit pictures</li> <li>• Edit sound</li> <li>• Edit video</li> </ul>	<p>Common formats, picture viewing tools, working with editing tools, resizing tools ...</p> <p>Common formats, sound playback tools, sound editing tools.</p> <p>Common formats, media players, video editing tools, etc...</p>

<p>Projects (10 periods)</p>		<p>To go deeper in the topics above and/or combine them. Cross-over projects with other subjects and/or language sections. Introductions to other topics (not mentioned above) ICT oriented school trips</p>
<p>Testing periods (8 periods)</p>		<p>Can be a test of a topic above or an evaluation of a project.</p>

## 6. Program for year 3 (64 periods)

<b>TOPIC</b> (number of periods is only a guideline)	<b>KNOWLEDGE &amp; SKILLS</b> The student must be able to:	<b>POSSIBLE PEDAGOGICAL APPROACHES</b>
Introduction to web design (20 periods)	<ul style="list-style-type: none"> <li>• Build a simple web site</li> <li>• Create a web site layout</li> <li>• Implement a menu structure</li> <li>• Insert content</li> </ul>	Use drag and drop web design tools WYSIWYG editors  Text, table, picture, link, video, etc...
Introduction to programming (20 periods)	<b>Use</b> <ul style="list-style-type: none"> <li>• simple algorithms</li> <li>• sequences</li> <li>• simple structures</li> </ul>	Game oriented programming environment Robotics
Projects (16 periods)		To go deeper in the topics above and/or combine them. Cross-over projects with other subjects and/or language sections. Introductions to other topics (not mentioned above) ICT oriented school trips
Testing periods (8 periods)		Can be a test of a topic above or an evaluation of a project.

## **7. Assessment (Formative assessment)**

The assessment should be mainly formative. By means of teacher's observation, tests and self-assessment the students acquire an awareness of their level and their progress throughout the course. The basis of the assessment should be the learning objectives of the cycle.

## **8. ICT in the European Schools**

### **a. Primary School**

There is currently no timetable set aside for computer science at the kindergarten and primary school.

However, many competences in the school directly or indirectly induce the use of ICT in classrooms.

It is therefore necessary to agree on some basic principles that will enable teachers to integrate ICT tools to their teaching methods and do so daily and multidisciplinary.

These principles will be addressed under the five following skills:

- 1<sup>o</sup> - to be familiar with an IT work environment;
- 2<sup>o</sup> - to create, produce, to deal with and use data;
- 3<sup>o</sup> - to search and gather information;
- 4<sup>o</sup> - to communicate and exchange;
- 5<sup>o</sup> - to adopt a responsible attitude, to be aware of the dangers of the Internet.

### **b. Secondary School**

ICT is taught through vehicular languages or language of the host country.

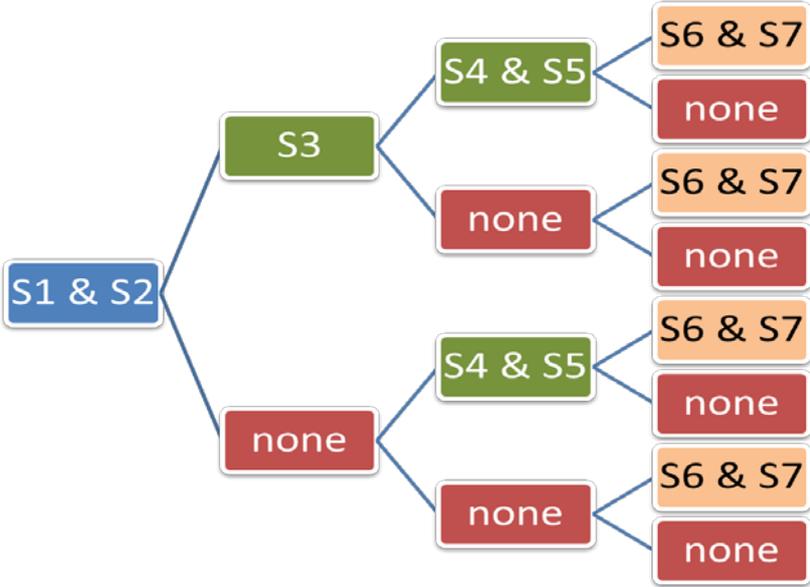
ICT is a 1 period a week compulsory course in years 1 and 2.

In year 3 ICT becomes a 2 period optional course.

**COMPULSORY**  
Counts towards:  
Minimum number of  
periods

**OPTIONAL:**  
Counts towards:  
Minimum number of  
periods

**COMPLEMENTARY**  
Counts towards:  
Minimum number of  
periods



## 9. Annex

### Recommendations for an ICT lab

- 1 computer for every pupil
- 1 computer for the teacher
- Internet connection
- Beamer (with interactive board) and/or monitoring software.
- Each pupil should have a username, password, email account and storage space.