

OPTIONS AND CHOICES FOR THE 6TH AND 7TH YEAR

2019-2021

Information booklet for students of secondary 5 and their parents.



GENERAL PRESENTATION

At the end of their secondary education in European Schools, pupils will sit a set of examinations officially named “European Baccalaureate” (EB).

The overall range of subjects on which students will be examined is determined by the choices they will make during their 5th year.

What follows is a presentation of the EB structure and of the rules presiding over students’ subject choices during the 5th year.

NUMBER OF PERIODS

The minimum number of periods to choose is 31, out of which at least 29 must be from compulsory subjects and the options in column 3 (see the table below).

The maximum number of periods is 35. Exceptionally, 36 or 37 periods may be allowed by the Director of the school following a recommendation of the class council.

Note that if you choose only two 4-period options, these will have to be taken as the two written examinations along with L1, L2 (or Advanced L2) and Mathematics. Choosing more than two 4-period options will therefore give you more flexibility to choose your European Baccalaureate examinations later.

SUBJECTS AND CHOICE STRUCTURE IN THE EUROPEAN SCHOOLS

Compulsory subjects		Options				Complementary subjects ³			
Column 1	Column 2		Column 3		Column 4		Column 5		
L1	4p	Biology ¹	2p	Biology	4p	Adv. L2	3p	Art	2p
L2	3p	Geography ²	2p	Chemistry	4p			Sports	2p
Maths 3 or Maths 5	3p 5p	History ²	2p	Physics	4p			L5 ⁴	2p
Ethics	1p	Philosophy ²	2p	Geography	4p				
P.E.	2p			History	4p				
				Economics	4p				
				L3	4p				
		¹ Biology 2p is compulsory unless Physics <u>or</u> Chemistry <u>or</u> Biology is chosen in column 3 ² All courses in column 2 must be taken if not chosen in column 3						³ The catalogue of complementary courses varies from one ES to another. ⁴ L5 must be different from L1, L2 and L3.	

CHOICE OF EXAMINATIONS IN THE 2021 EUROPEAN BACCALAUREATE SECTION

Written Examinations		Oral Examinations	
1.	L1 (compulsory)	1.	L1 (compulsory)
2.	L2/Adv. L2 (compulsory)	2.	L2 or Adv. L2 or History 2p. or History 4p. (if not chosen as written examination) or Geography 2p. or Geography 4p. (if not chosen as written examination)
3.	Mathematics 3 or 5p.	3.	Biology 2p. or Biology 4p. (if not chosen as written examination) or Philosophy 2p. or Chemistry (if not chosen as written examination) or Physics (if not chosen as written examination) or L3 (if not chosen as written examination)
4.	Option 4p.		
5.	Option 5p.		
	<p>Restrictions:</p> <p>1. Candidates who have chosen to follow an advanced course in L2 will be compulsorily examined on the subject matter of those courses and not on the subject matter of the corresponding basic course.</p> <p>2. Written examinations 4 & 5 concern 4-period options only</p>		<p>Restrictions:</p> <p>1. Candidates who have chosen to follow an advanced course in L2 and who wish to choose L2 for their second oral examination will be required to sit an examination on that advanced course, and not on the corresponding basic course.</p> <p>2. Candidates who do not wish to sit an oral examination in L2 (basic or advanced course) will sit an examination in History (2 or 4 periods) or Geography (2 or 4 periods). It is possible for candidates to sit the History or Geography oral examination only provided that they have not chosen to sit the subject in question as a written examination.</p> <p>3. Examination 3: candidates will be required to sit an examination from amongst the options listed above, which they may choose freely, provided that they have not already chosen to take the subject in question as a written examination.</p>

THE OPTIONS AT TALLINN EUROPEAN SCHOOL

OPTIONS OFFERED IN TALLINN EUROPEAN SCHOOLS IN 2019-2021

No.	Explanation	Subject
1	You must take all four of these subjects	L1
		L2
		Ethics
		PE
2	You must choose either	Maths 5p
		or Maths 3p
3	<p>In this section, you must choose a minimum of two 4p options and a maximum of four 4p options.</p> <p>Students choosing Physics should have a strong competence in Mathematics and are strongly advised for that purpose to choose also 5p Maths.</p> <p>The subjects in green are guaranteed, for all the others there must be <u>at least 4 students</u> to set up the course.</p>	Biology 4p
		Chemistry 4p
		Physics 4p
		L3 Spanish 4p
		L3 French 4 p
		Economics 4 p
		Geography 4p (in L2)
		History 4p (in L2)
4	If you have not chosen History 4p above, you must choose History 2p here. Same with Geography	History 2p (in L2)
		Geography 2p (in L2)
		Philosophy 2p
5	If you have chosen Physics and/or Chemistry above, you may still choose Biology 2p here. If you chose no science in section 3, you must choose Biology 2p. here.	Biology 2p
6	You may choose the advance course in your Language 2. This has implications on your final examinations. This year only the English L2 course will be available.	Adv. L2 English 3p
7	<p>You may choose one or two complementary courses (2p each).</p> <p><u>At least 5 students</u> are needed to set up a complementary course.</p>	Sports 2p
		Art History 2p
		L5 Finnish 2p
		L5 German 2p
		L5 Italian 2p
		L5 Spanish 2p

OPTIONS BY SUBJECT

ENGLISH L2 ADVANCED (3 PERIODS)

This course will be offered to those who have developed an average or better capacity in English as a second language and who wish to extend their knowledge of it in the realms of the literatures and cultures of the English-speaking world. The centre of gravity of the course will be the English language of the 20th century.

Its scope allows the study of the language in many parts of the world, but with particular reference to the British Isles. The study of language and literature is considered indivisible. Over the two years three or four themes will be chosen for study, of which the following list is intended to be only illustrative: - race - childhood - science, technology and society - war - decolonisation. Each theme will be explored through a range of appropriate linguistic media. The work will be arranged so that in the 6th year two or three themes will be followed, at the discretion of the teacher in each school, and in the 7th year one theme and two works of literature common to all schools will be prescribed.

MATHEMATICS (3/5 PERIODS)

Mathematics is compulsory for all students in Years 6 and 7. It is offered at two levels: there are courses of three and five periods per week.

It is important that mathematicians in school use modern technology as they do in the outside world. As such, possession of a Computer Assisted System (CAS) graphing calculator is compulsory. Further details are available on the school website. It is used firstly to enrich each course by reinforcing and saving time on 'pen and paper' skills which are also acquired during the course. Secondly, it is used to model realistic data, which would be impossible to do otherwise. As the assessment process reflects the programme, its use is obligatory in at least two-thirds of all formal assessments.

The reinforced course is a **5-period course**. This is the mathematics course for students who are strong in Mathematics and have completed the six-period course in the fourth and fifth years. They may also need a good knowledge of mathematics for university entrance onto specific courses or may just wish to keep more career options open at this stage.

SYLLABUS: The emphasis of the syllabus is mainly pure mathematics, developing students' ability to analyse functions and their graphs, including differential and integral calculus. The course also includes work on vector geometry, probability, complex numbers, sequences and series.

EXAMINATIONS: There are end-of-semester exams in year 6 (3 hrs in total), and year 7 (4 hrs in total). In each session, one paper involves using the CAS calculator, while the other does not.

The basic course is a **3-period course**. This course, which is not as demanding as the five-period course, is aimed both at students who find the subject demanding as well as students who do not intend to continue their studies in areas where mathematics plays a crucial role.

Whilst not attempting to cover the full breadth of the 5-period course, several of its topics are covered in some depth. The four-period mathematics option in years four and five automatically leads on to this course. Although students who found the six-period course in fourth and fifth year demanding will feel this is their first option to consider.

SYLLABUS: The emphasis of the syllabus is mainly pure mathematics, developing students' ability to analyse functions and their graphs, whilst continuing the probability work from previous years. The course also includes work on series, trigonometry and statistics.

EXAMINATIONS: There are end-of-semester exams in year 6 (2¼ hrs in total) & year 7 (3 hrs in total). In each session, one paper involves using the CAS calculator, while the other does not.

CHEMISTRY (4 PERIODS)

This course is important for those students who intend to follow university courses in some scientific subjects (mostly Chemistry, Environmental Sciences, Materials Science, Biochemistry, Pharmacology, Metallurgy and Chemical Engineering). It is also suitable for students who have interest and ability in Chemistry but who do not intend to pursue a scientific career.

Students choosing this subject should have achieved a high standard in year 5 Chemistry and should feel competent in all aspects of the course. Chemistry students will be expected to use their ICT skills. In general, students will need to be enthusiastic and committed to developing a greater understanding of Chemistry. They need to be independent learners.

Formal assessment in Year 6 comprises two written examinations at the end of each semester. In Year 7 there is a three-hour written paper at the end of the first semester, followed by the three-hour BAC examination for most students in June. It is also possible to be assessed by an oral examination at the end of the course. There is no practical examination, although laboratory work is an integrated part of the course. The following topics are covered.

Year 6

- Electronic structure of the atom and the Periodic Table
- Chemical bonds
- Intermolecular bonds
- Ideal gas law
- Energy in Chemistry
- Chemical kinetics and Equilibria
- Organic Chemistry I: Aliphatic and Aromatic Hydrocarbons

Year 7

- Acids and Bases
- Electrochemistry
- Redox Reactions
- Organic Chemistry II: Alcohols, Aldehydes and Ketones, Carbohydrates, Carboxylic Acids, Fats and Oils, Amines and Amino acids

ECONOMICS (4 PERIODS)

To study the 4-period option in 6th and 7th year, students must take Economics in 4th and 5th year. The course introduces students to Economics and lays down the basis for more detailed study in the 6th and 7th year. The student will learn to use simple statistics, charts and graphs as economic tools. We then introduce the students to macroeconomics; international trade, exchange rates (including the Euro), standards of living, national income, inflation and unemployment. Throughout the course, students will be encouraged to use the internet to conduct research and get up-to-date information.

LANGUAGE 3 (4 PERIODS)

These courses are a continuation of the S5 L3 courses. Languages that could potentially be offered, depending on demand, are Spanish and French. Although L3 is an optional subject, it is the most popular 4-period choice with Baccalaureate candidates, and reinforces the main strength of the EB, which is its emphasis on languages. Here is an overview of the language levels expected at the end of S7:

	Early education	Primary	Secondary Year 3	Secondary Year 5	Secondary Year 7
L2	0	A2	B1	B2	C1
L3	0	0	A1+	A2+	B1+
L4	0	0	0	A1	A2+
L5	0	0	0	0	A1+

In total, there are 135 minutes of lessons per week. The program is personalized by taking into account the level of every student. This program is an ideal to learn one of the options above as your third language 3. The main objective of L3 courses (aiming at level B1+ CECRL in S7), is the control of forms of gradually more complex language.

PHYSICS (4 PERIODS)

Physics is the study of the physical world and the laws which govern it. It is thought by many to be the most fundamental science, which underpins other branches of science and technology. Studying Physics at school is a passport to a huge range of university courses in pure and applied sciences and engineering. The academic, practical and thinking skills which it helps to develop are also invaluable for those going on to courses and careers outside science and technology and, in every case, Physics is a highly-regarded component of the student's overall qualifications.

Physics graduates might work in areas as diverse as medical or biological physics, astronomy, electronics, materials or particle research or successfully apply their problem-solving approach in the financial sector. Engineering spans the whole range from ICT to construction.

The EB syllabus is rooted in just a few basic principles which are built up to form a coherent body of knowledge and understanding. These ideas can be applied to any changing situation and so material is always up-to-date. Even a question about the discovery of the Higgs-Boson, or the development of nuclear fission space rockets, is totally possible within the current syllabus.

There is a strong practical element running throughout, but there are also challenging theoretical concepts. Students will need sufficient competence to deal with the mathematics and calculations involved. The programme is as follows:

<p><i>6th year</i></p> <p>Kinematics Dynamics Circular motion and gravitation Simple harmonic motion Electric and magnetic fields Capacitance and Energy storage Electromagnetic induction One of optional topics (based on students' preferences) A.C circuits Kinetic Theory and Thermodynamics Special relativity Assessment is based on regular tests and assignments and an exam each semester.</p>	<p><i>7th year</i></p> <p>Gravitational fields Motion of charged particles in electric and magnetic fields Waves Wave-particle duality Atomic physics Nuclear physics The Baccalaureate mark is based on assessment during the 7th Year. There are regular tests and an exam of 3h at the end of each semester. An oral examination is available as an alternative to the final written paper.</p>
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Due to the challenging nature of the subject, the teacher concerned has the right to choose students for the course and to advise students whose talents may lie elsewhere to choose an alternate subject.

BIOLOGY (4 PERIODS)

This course is designed to prepare students for a variety of higher studies in biological and related subjects (biological, medical and environmental sciences). This course emphasises the application of the scientific method to the study of biological processes. The course reflects the modern face of biology and the underlying importance of molecular biology and ecology is stressed in all of the main themes.

A range of skills are developed like interpreting scientific texts, extracting important information from texts, broadening scientific vocabulary, following instructions, making precise observations and accurately recording results, analysing and interpreting data as well as communicating effectively in written and oral reports.

B mark - semester examination (duration 3 teaching periods) Baccalaureate - The examinations will normally cover the year 7 syllabus, but will also test knowledge gained in previous years, especially year 6 Students can also choose to sit the written or the oral examination in the baccalaureate.

Year 6 topics

1. Cytology. Composition of living things. Biological molecules. Enzymes – structure and function, modelling. The cell. Ultrastructure – methods used in cytology. Structure and function of the organelles. Excitable cells – structure and function of neurons and muscle cells.
2. Internal regulation. Nervous and hormonal regulation. Homeostasis. The bodies defence. Immune system structure and function in detail. Major characteristics of human and animal behaviour
3. Management of water resources. Recycling and treatment of waste.

Year 7 topics

1. Cytology. Membranes and cellular exchanges. Energy fixation and formation of organic molecules. Photosynthesis in detail. Energy release and the breakdown of organic molecules. Respiration in detail (aerobic and anaerobic)
2. Genetics. Classical genetics. Molecular genetics – replication, transcription, translation. Fate of proteins. Gene regulation. Genetic manipulation. Mutations. Mutagenic agents. Human heredity. Methods of study. Hereditary diseases.
3. Evolution. Evidence of evolution – paleontology, comparative anatomy, biochemical evidence, evidence from karyotypes. Origin of life. Theories of evolution. Human evolution.
- 4.

BIOLOGY (2 PERIODS)

This course is designed for students with a literary, linguistic or artistic emphasis in their studies. The aim is to give the students a broad overview of the chosen topics, to introduce modern biology integrating it with ethical, cultural and technological issues showing the connections of biology to other disciplines.

The course highlights the connection between man and the environment. A range of skills are developed like interpreting scientific texts, broadening scientific vocabulary, observing and recording data, simple data analysis and transference of knowledge between domains as the unity of biological science is explored.

Although it is not necessary to study chemistry alongside this course it is desirable that the student has a sound understanding of basic chemistry.

B mark – written exam Baccalaureate examination - covers year 7 syllabus, but will also test knowledge gained in previous years, especially year 6.

Year 6 topics

1. Nutrition. Food composition. Role of different food components. Food and health. Making and preserving food.
2. Disease. Pathogens. Transmission of disease. Non-specific defence. Specific defence
3. Interaction between Man and environment. Nerves. Hormones. Behaviour. Effect of chemicals on the nervous system.
4. Impact of Man on Nature. Treatment and recycling of waste. Biodiversity. Atmospheric pollution. Water purification

Year 7 topics.

1. The cell. Evolution of the cell. Cell structure.
2. Genetics. Molecular Genetics. Classical Genetics (Methods of study). Human Genetics (Hereditary diseases)
3. Evolution. Evidence. Theories. Evolution of Man

GEOGRAPHY (2 OR 4 PERIODS)

Students studying geography will discover the diversity of the subject in human, economic, social and physical terms.

A varied approach to learning is encouraged where students will develop analytical, research and discussion skills, working as a class, in groups or individually. This should enable students to relate theoretical ideas to practical real-world situations.

GEOGRAPHY 2P

In Year 6 students should acquire a knowledge of regions beyond Europe

- What is Development?
- Managing the earth's resources
- Environment in danger – managing the threats?
- Globalization - danger or opportunity?
- And carry out a research project.

The 7th year syllabus is centred on Europe and the European Union and is organised into four large themes:

- Europe and the European Union
- A natural environment increasingly modified by man
- Europeans
- The economic sector in change

GEOGRAPHY 4P

The more advanced geography course is suited to students who have a real curiosity about the world in which we live, its problems and diversity, and the impact of humans on the environment. Students choosing this course will benefit from an enquiry-based approach and will develop a range of skills in the analysis of maps, satellite images, photographs, statistics etc.

Content and structure

6th year

- Physical geography and human activity (landscapes and natural hazards): including a detailed case study of one non-European landscape (geology, processes shaping the land, human interaction) and one natural hazard (location, characteristics, management of risk)
- Natural resources: including a study of one renewable and one non-renewable resource and the issue of conflict over resources
- The complexity of a global world:
 - Development: a world with inequalities (measuring development, problems, possible solutions and an individual country study)
 - Globalisation: definitions, positive and negative consequences, case study of a multinational and alternatives to globalisation)
- Fieldwork: Aims, hypotheses, selecting and collecting data, analyse and presentation of results, conclusions.

7th year

This year is focused on Europe and the European Union in particular.

- The Natural Environment: a general overview, plate movements, a case study of the Alps, European climates and the impact of climatic variations on human activities
- Population: factors influencing distribution and density, population structure, internal and external migration
- Economy of Europe: agriculture, industry and services
- European Union: Issues and challenges: defining the EU and its aims, sustainability (particularly in terms of agriculture and energy), widening and deepening the EU

ASSESSMENT

Year 6

Students will have one three-period examination per semester, for which the B mark will be awarded. A marks are given twice a year according to a student's performance in all aspects of work and class participation.

Year 7

Students will have one three-hour written exam as part of the Pre-Bac and they can choose to do an oral examination or a written examination as part of their final set of Baccalaureate examinations. The final written exam (if chosen) will include questions focusing on document interpretation, skills, analysis and essay writing.

HISTORY (2 OR 4 PERIODS)

The history curriculum in S6 and S7 intends to give pupils the feeling of a common contemporary history, which takes into account the student's own national history, but also Europe's destiny among other nations, in the world scale. This programme aims to make a significant contribution to the development of future European citizens, endowing them with a critical spirit and an awareness of heritage, ready to play an active role in the 21st century world.

What is at stake for the students is to better understand nowadays world to the light of the great events that have impacted the 20th century and that have deeply changed the European history so that the European people decided to unite themselves. The history of Europe from 1914 to the present day has a prominent place in the syllabus as a compulsory core course studied by both 2 period and 4 period students throughout years 6 and 7. By placing greater emphasis on the experience of populations, the diverse regions and states of Europe, and the importance of teaching social, as well as political and economic history, this syllabus better reflects the complexity and diversity of our continent's contemporary history

The second part of the syllabus allows students to acquire further historical knowledge with a more thematic approach which takes into account recent historiography and emphasises a greater awareness of the world through the study of other areas and continents. In the advanced course (4 periods), the study of China since 1949 and decolonization will be added, in addition to precise study cases on Israel-Arab conflicts, UN and media since 1945.

THE HISTORY PROGRAMME FOR YEARS 6 AND 7 IN THE EUROPEAN SCHOOL

EUROPE AND THE WORLD FROM THE END OF THE 19TH CENTURY TO THE START OF THE 21ST

COMPULSORY CORE: EUROPE AND EUROPEANS SINCE 1914

Europe 1914-1945

Year 6 – 2 period
(approx. 24 lessons)

Year 6 – 4 period
(approx. 48 lessons)

- 1) Europe transformed by the First World War
- 2) Dictatorship and democracy: Europe in the interwar years (1918-39)
- 3) Europe and Europeans in the Second World War

Europe since the Second World War

Year 7 – 2 period
(approx. 24 lessons)

Year 7 – 4 period
(approx. 45 lessons)

- 4) Post-war Europe (1945-1949)
- 5) Eastern Europe, Western Europe (1949-1973)
- 6) Europe from dictatorship to democracy (1974 - 1995)
- 7) Europe in the making (1945 to today)

OPTIONAL THEMES

Year 6 – 2 period		Year 6 – 4 period	
3 themes (minimum) x 8 lessons		3 themes (minimum) x 15 lessons	
6.2A	The USA 1898 to 1945	6.4A	The USA since 1898
6.2B	Culture and Society before 1945	6.4B	Culture and Society before 1945
6.2C	European colonialism and imperialism from the end of the 19 th century to 1945	6.4C	European colonialism and imperialism from the end of the 19 th century to 1945
6.2D	Warfare in the 20 th century	6.4D	Warfare in the 20 th century
6.2E	Women in the 20 th century	6.4E	Women in the 20 th century
6.2F	Russia and the USSR 1917 to 1953	6.4F	Russia and the USSR 1917 to 1953
6.2G	Genocide in the 20 th century	6.4G	Genocide in the 20 th century

OPTIONAL THEMES

Year 7 – 2 period	
3 themes (minimum) x 10 lessons	
7.2A	Cold War
7.2B	China since 1949
7.2C	Decolonisation after 1945
7.2D	Arab-Israeli conflict since 1947
7.2E	The USA after 1945
7.2F	The United Nations
7.2G	Mass media, popular culture and authority since 1945.

COMPULSORY THEMES

Year 7 – 4 period	
3 compulsory themes x 15 lessons	
7.4A	Cold War and international relations since 1945
7.4B	China since 1949
7.4C	Decolonisation and independence since 1945

LANGUAGE 5

The languages available for the current year group, based on their current L1s, L2s and L3s, are: Finnish, German, Italian, Spanish.

Language 5 is an introduction to a new language, which aims at bringing students to attain the level indicated in the Language 3 table of attainable levels.

This is a beginners' course for those who have no previous knowledge of the language (although «false beginners» sometimes make up an element of the class). The class is designed to give pupils a solid foundation in the basics of It grammar, a bank of general purpose vocabulary and useful everyday expressions. A recognized course book is normally used together with supplementary material and simple readers. Listening and reading comprehension will be also improved by using other educational materials:

- Simple stories and novels adapted for the use of beginners
- Dedicate Websites, interactive CD, videos
- Debates, individual and group presentations, roleplay simulations, etc.
- Learning a language also means learning its culture and civilization.

ART HISTORY

The Art History course mainly covers the history of European painting, sculpture and architecture. It can also include the history of photography and design as well as reference to the art of other civilizations.

The subject Art History in the European schools refers to the visual arts. Visual arts contain the complex process of perception, reflection and interpretation of the world around us.

Images help us to define our identity and give aesthetic pleasure. They allow us to express feelings and thoughts and to communicate them to others. Through images reality is perceived, interpreted and even created, because images as creations constitute a reality of their own. With the development of modern media, images have gained even more importance. Since they are omnipresent and quickly available, they are capable of having a major impact on our understanding of the world. Therefore, it is necessary to comprehend the implications of their influence with critical awareness and to bring this awareness to consciousness in the teaching situation.

Art History enlarges our knowledge of and insight into the surrounding world by giving shape to the important outer and inner characteristics of this world. Art contributes to student's knowledge of the visually rich international context in which the European schools exist, by exposing them to a selection of the vast body of art imagery from all over the world that has contributed to our visual development. By using examples from art history students learn about art as a language being based on cultural, social, political and individual backgrounds.

SPORTS

The complementary sport course engages students' interest in their physical development and further develops acquired competences through physical fitness, individual and team sports.

The diversified programme should encourage students to take the initiative and make informed decisions in the context of sport. Furthermore, it should increase joy and motivation while doing physical activities, thus integrating sports as an important element in lifestyle.

The course follows two main aims: a) to develop an extra depth of knowledge, skills and attitude that students have acquired during their PE lessons in cycle 1 (S1-S3) and cycle 2 (S4+S5); b) to introduce sports/activities which students have not experienced during their PE lessons in cycle 1 (S1-S3) and cycle 2 (S4+S5)

The teacher's and the students' interest and local facilities may determine this.