Curriculum, subjects, number of hours

According to law 4386/2016 [1], the curricula of epangelmatika lykeia (vocational upper secondary schools - EPAL) are drawn up by the Educational Policy Institute (IEP) [2] and include the following:

- Explicitly stated learning outcomes sought after and being analysed in knowledge, skills and competences, per subject, sector and specialisation
- Teaching material being prepared in line with the learning outcomes sought after for each subject. The teaching material of laboratory education courses is accompanied by an annex, describing the laboratory equipment required for their implementation
- Instruction guidelines including the teaching techniques, the teaching methods and the appropriate supervisory means.

The curricula in question are prepared in accordance with the guidelines of the European Credit System for Vocational Education and Training - ECVET.

The curricula are aligned on job profiles, which are themselves defined and certified by the National Organization for the Certification of Qualifications & Vocational Guidance (EOPPEP) [3].

Timetables and curricula are assessed, evaluated and, if deemed necessary, renewed. Since school year 2016/17, day and evening EPALs are running the new programme of studies for grades A and B, as specified by law 4386/2016 [1]. The implementation of the new structure for grades C and D of EPAL took place during school years 2017/18 and 2018/19 respectively.

Grade A

The curriculum for EPAL grade A includes:

- General education subjects common to all students
- Specialisation subjects and
- Elective subjects.

Taught times for general education subjects, orientation subjects and elective subjects administered at day EPAL grade A, are specified by ministerial decision Φ2/92271/05-06-2018 [4].

<table>
<thead>
<tr>
<th>No</th>
<th>Subjects</th>
<th>Hours</th>
</tr>
</thead>
</table>

   I. General education subjects
<table>
<thead>
<tr>
<th>No</th>
<th>Subjects</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Modern Greek</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Mathematics&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Algebra</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Geometry</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Natural Sciences&lt;sup&gt;2&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physics</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Chemistry</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Biology</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Civic Education - (breaks down into the subjects of Economy, Political</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Institutions and Sociology and Principles of Law)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>History</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Religious Education</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Foreign Language (English)</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>IT&lt;sup&gt;3&lt;/sup&gt;</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>

### II. Specialisation subjects

<table>
<thead>
<tr>
<th>No</th>
<th>Subjects</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Research Project in Technology&lt;sup&gt;3&lt;/sup&gt;</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Career Guidance in Schools - Health &amp; Safety in the Workplace</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Creative Activities Zone</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>7</strong></td>
</tr>
</tbody>
</table>

### III. Elective subjects <sup>4</sup>

<table>
<thead>
<tr>
<th>No</th>
<th>Subjects</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Health Education</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Introduction to Linear and Architectural Drawing</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Introduction to Electrical &amp; Electronic Engineering</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Introduction to Mechanical Engineering</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Introduction to Economics</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Introduction to Composition</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Agriculture and Sustainable Development</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Shipping</td>
<td>2</td>
</tr>
</tbody>
</table>
Mathematics: subject is split into: a) Algebra and b) Geometry

Natural Sciences subject is split into: a) Physics, b) Chemistry and c) Biology

When the number of students per classroom is more than 16, classroom is divided into two (2) groups. IT and Research Project in Technology are taught alternately for two (2) hours per week

Students have to choose 3 among 8 available subjects, depending on the departments operating within the EPAL.

Since school year 2018-2019, the curricula for grade A of the 3-year evening EPAL are defined by ministerial decision Φ2/107972/Δ4/28-06-2018 [5].

Grade B

According to law 4386/2016 [1], sectors of studies are set up for EPAL grade B; in grade C these will be subdivided into separate specialisations. Students who enrol in grade B apply for the sector they wish to follow.

Therefore, the curriculum includes:

- General education subjects offered to all students
- Technological-vocational subjects per sector.

The curricula for general education and technological-vocational subjects per sector administered in day EPAL grade B, are specified by ministerial decision Φ2/92271/Δ4/05-06-2018.

<table>
<thead>
<tr>
<th>No</th>
<th>Subjects</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Modern Greek Language</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Mathematics*2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Natural Sciences*3</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Religious Education</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Foreign Language (English)</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Introduction to the Principles of Computer Science</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Physical Education</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

*1 Taught times for the technological-vocational subjects administered in EPAL grade B of the sector of Maritime Occupations, are specified by joint ministerial decision Φ2/129460/Δ4/30-07-2018 [6] issued by the Minister of Education and Religious Affairs and the Minister of Shipping & Island Policy.
According to the new programme of studies and under ministerial decision Φ20/82041/Δ4/20-05-2016, 9 sectors are set up for EPAL grade B:

1. Sector of Agriculture, Food and Environment
2. Sector of Economics and Management
3. Sector of Construction Works, Built Environment and Architectural Design
4. Sector of Applied Arts
5. Sector of Electrical & Electronic Engineering and Automation
6. Sector of Mechanical Engineering
7. Sector of Maritime Occupations*
6. Sector of ICT
8. Sector of Health - Welfare - Well-being

Since school year 2018-2019, the curricula for grade B of evening EPAL are determined by ministerial decision Φ2/107972/Δ4/28-06-2018.

Grade C

Since school year 2017-2018, grade C of day EPAL operates according to the structure of studies of EPAL, as specified by law 4386/2016.

The curriculum delivered in EPAL grade C includes

- General education subjects offered to all students as well as
- Specialisation subjects.

**Taught time for day EPAL grade C general education subjects**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greek Language</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
</tr>
<tr>
<td>Algebra</td>
<td>2</td>
</tr>
<tr>
<td>Geometry</td>
<td>1</td>
</tr>
<tr>
<td>Science</td>
<td></td>
</tr>
<tr>
<td>Physics</td>
<td>2</td>
</tr>
<tr>
<td>Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>Introduction to the Principles of Computer Science</td>
<td>1</td>
</tr>
<tr>
<td>Foreign Language (English)</td>
<td>1</td>
</tr>
<tr>
<td>Physical Education</td>
<td>1</td>
</tr>
</tbody>
</table>

The curriculum for evening EPAL is specified by ministerial decision Φ2/107972/Δ4/28-6-2018.

For grade D of evening EPAL that will operate for the last time during school year 2019/20, the curricula are specified by ministerial decisions Φ2/65921/Δ4/21-04-2017 [7] and Φ2/95229/Δ4/07-06-2017 [8].

During their enrolment in grade C students can apply for any specialisation of the sector that they
attended in grade B. The sectors and the respective specialisations are defined by ministerial decision Φ20/82041/Δ4/20-05-2016 [9], as follows:

- **Sector of Informatics**
  - Informatics Applications Technician
  - Computer and Computer Network Technician

- **Sector of Mechanical Engineering**
  - Mechanical Constructions Technician
  - Thermal and Hydraulic Facility Engineer and Petroleum Technology & Natural Gas Engineer
  - Refrigeration, Ventilation and Air Conditioning Technician
  - Motor Mechanic
  - Aircraft Assembly Mechanic

- **Sector of Electrical & Electronic Engineering and Automation**
  - Electronic and Computer Systems and Facilities Technicians
  - Electrical Systems, Facilities and Networks Technicians

- **Sector of Construction Works, Built Environment and Architectural Design**
  - Construction and Geoinformatics Technician

- **Sector of Economics and Management**
  - Economics and Management Services Officer
  - Storage and Supply Systems Officer
  - Commercial and Advertising Officer
  - Tourist Enterprises Officer

- **Sector of Agriculture, Food and Environment**
  - Crop Production Technician
  - Animal Husbandry Technician
  - Floriculture and Landscape Architecture Technician
  - Food and Drink Technology Technician

- **Sector of Maritime Occupations**
  - Merchant Ship Captain
  - Merchant Ship Engineer

- **Sector of Health - Welfare**
  - Nursing Assistant
  - Medical - Biology Lab Assistant
  - Nursery/Childcare Assistant
  - Physiotherapy Assistant
  - Dental Technician Assistant
  - Radiology Lab Assistant
  - Pharmacist Assistant
  - Chemical Lab and Quality Control Assistant
  - Cosmetologist
  - Hairdresser
Sector of Applied Arts

- Graphic Designer
- Interior Designer
- Gild & Silversmith
- Conservator-restorer
- Mosaic and Stained Glass
- Fashion Design and Production
- Furniture making - Carpentry

Teaching methods and materials

Until school year 2017/18, school advisors had the responsibility for the scientific and pedagogical support and guidance of secondary education teachers. Law 4547/2018 [10] replaced them with the institution of co-ordinators of educational work and established new structures for the support of educational work:

- Regional Centres for Educational Planning (PEKES)
- Educational and Counselling Support Centres (KESY)
- School Networks of Educational Support (SDEY)
- Committees of Interdisciplinary Educational Evaluation and Support (EDEAY)
- Environmental Education Centres (KPE).

School textbooks and curricula are developed under the supervision of the Institute of Educational Policy (IEP) and are approved by the Ministry of Education.

The publication and distribution of the textbooks is conducted by the Computer Technology Institute & Press “Diophantus” (ITYE) [11], a research and technology organisation focusing on the research and the effective use of Information and Communication Technologies in the education sector (law 3966/2011 [12]).

Textbooks are distributed free of charge in public schools. They are common for all students of the same grade.

Within the framework of vocational education, the textbooks of the Eugenides foundation [13] are used, according to law 4186/2013 [14].

At the beginning of the school year, teachers of all specialisations are given teaching guidelines covering general and specific objectives of the cognitive subjects they are about to teach. They are also given additional general and specific methodological instructions on the teaching methods of these cognitive subjects.

However, teachers enjoy a relative autonomy as they are free to modify their teaching methods in ways that suit the nature of the subject they teach and students’ abilities and interests.

In vocational secondary education, the application of modern teaching methods is sought after, depending on the desired learning outcomes, the modern professional and scientific trends in every sector of vocational education and within the framework of health and safety at the workplace.

Curricula are revised and updated, as foreseen in the relevant legislation. Methods such as experimenting, simulation, case studies, demonstration, role playing may be used parallel to group teaching and exercises for skills development. Pupil encouragement to be autonomous, take initiative and engage in active participation is crucial in the context of practice in work areas, and practice in school laboratories or special laboratory centres (EK).
Laboratory centres

Laboratory centres operate in an independent administrative structure as school units and are in cooperation with EPAL, EPAS and IEK of their area. They are formed by at least two school units. Laboratory centres are premises especially designed with equipment of different fields or specialisations. Students of EPAL, EPAS and IEK perform laboratory practice. The teaching of relevant subjects correspond to the requirements of the detailed curricula.

The school laboratory of natural sciences (SEFE) is the place where natural sciences laboratory teaching takes place. The implementation of lab activities is an integral part of teaching natural sciences subjects.

The laboratory of the vocational upper secondary school is modern and it can function both as a place for teaching and as a place for practice and activities. After all, according to contemporary teaching concepts these two cannot be dissociated, at least not in the case of teaching natural sciences.

The students work in groups on a specific subject, developing their innate creativity in a spirit of cooperation. They have at their disposal up-to-date instruments that help them discover not only the environment and the laws that govern it, but also their application to contemporary life and work environment.

In order to offer extra support to lab teaching of natural sciences (Physics, Chemistry, Biology, Geology-Geography), laboratory centres of natural sciences (EKFE) operate. There can be one or more depending on the number of school units at each education directorate.

EKFE are centres of research, technical and pedagogical support of the lab teaching of natural sciences subjects. They use all appropriate means. They co-operate with the coordinators of educational work of natural sciences.

Moreover, they contribute to the organisation of SEFE of primary and secondary education schools.

Educational platforms and digital portals

Through the official digital educational portal of the Ministry of Education, the educational community (teachers, students) and parents are informed of various issues of interest such as:

1. Useful links
2. Educational news and announcements
3. Conferences – events of various bodies
4. Approved educational programmes for the school year
5. Educational visits
6. Shows
7. Transnational programmes
8. Health education programmes

The user can quickly and easily search for information. The portal is utterly useful to the education community since it is a major attempt to gather all relevant information in a single site on the Internet.

The educational resource open-edu [15] also supports this effort. The website aims at presenting all free:

- Digital resources
- Libraries
- Services.
In parallel, the user generated content Photodentro [16] operates. Teachers and members of the wider educational community can:

- Post their own digital content or
- Search for digital content.

The aim is to gather learning material, developed by members of the educational community who wish to share them, such as:

1. Experiments
2. Interactive simulations
3. Investigations
4. Images
5. Educational games
6. 3D maps
7. Exercises
8. Educational scenarios
9. Lesson plans.

Also, the Advanced Electronic Scenarios Operating Platform (AESOP) [17] of the Institute of Educational Policy is a support website for the education community. Various scenarios for different subjects of primary and secondary education are available.

**Research project in technology**

Since school year 2016/17, EPAL grade A incorporates the following subjects: Research Project in Technology, Creative Activities Zone and School Career Guidance - Health and Safety at the Workplace.

Research project in technology aims to introduce students to research methodology and the technologies used in local production procedures and the different occupations corresponding to the existing EPAL departments and specialisations.

The main learning objective is to offer to all students the opportunity to identify their talents and skills in a number of ways and to enhance their self-esteem through teamwork and innovation. The subject attempts to motivate students and foster their interest in future career and study options in the orientation of their choice.

The subject is delivered as follows: the first stage identifies students' initial career and occupation interests as well as their readiness for conducting research projects. Students are then divided into groups based on their initial interests on future career and education, and choose a subject for their project/essay. Over the course of the school year, a total of 3-4 projects shall be completed. The precise number of projects to be conducted is specified by the teacher together with the classroom students.

Besides annual teaching guidelines, teaching resources for delivering the recommended taught activities are available on the vocational education platform of the Institute of Educational Policy: [http://www.iep.edu.gr/el/tee-yliko/protaseis-erevnitikis-ergasias-stin-texnologia](http://www.iep.edu.gr/el/tee-yliko/protaseis-erevnitikis-ergasias-stin-texnologia) [18].

**New interventions and actions**

**A new beginning for EPAL**

The programme "A new beginning for EPAL" is a multi-faceted programme is co-funded by the Partnership Agreement. It includes various interventions that refer to the psychological, social and learning support of students, the development of support networks and supplementary actions.
The programme was piloted in 9 EPALs in school year 2017/18 and the aim was to expand it in all EPAL of the country during the period 2018-2020. It has been designed to contribute to the upgrading of quality of vocational education.

It is applied to grade A students of EPAL. It supports students in various ways, in order to use it as a transition class from lower secondary education to vocational education.

Its main actions are:

1. Programmes of alternative remedial teaching: diverse teaching of the subjects of modern greek and mathematics with two teachers being present at the same time in the classroom within the main school timetable. The aim if the support of grade A students in their effort to achieve higher levels of literacy and numeracy
2. Staffing of EPAL with psychologists with the aim of psychological support for students and the improvement of the climate and communication in the school community
3. Mobilisation of the institution of the role of the teacher advisor and the class committee with the aim to support in a systematic way students in school life
4. Scientific and pedagogical support throughout the school year
5. Development of school networking with the aim to exchange experiences, the development of dialogue, joint programming and implementing teaching and other educational experimentations.

Source URL:

Links
[1] http://www.et.gr/idocs-nph/search/pdfViewerForm.html?args=5C7QrtC22wFHp_31M9ESQXdtvSoClrl8u8Ba_xZ1WCxtl9LGdKF53UXsx942CdyqX5QYNuqAGCF0lfB9Hl6qSYtMEkEHlnFqmgjSAS5WisluV-nRwOl0oKqSe4BIOTSpEWYhyszF8P8UqWb_zFijNy9Cveja7yyv69r1QVBHfxeE813E81XBq5P_UfYypvb
[4] http://www.et.gr/idocs-nph/search/pdfViewerForm.html?args=5C7QrtC22wG3UHk-ZeQu wndtvSoClrl8D444ILnbZMP3U4LPcAS1eLjn48_97uHrMtszFze yCiBSQOpYnTy36MacmUFCx2ppFvBej56Mmc8Qdb8ZfRjqZnsIAdk8Lv_e6czmhEembNmZCMxLMtUHt-jYRdqQzswafDWmdinMb1N8vqBqSpKnevKp0
[5] http://www.et.gr/idocs-nph/search/pdfViewerForm.html?args=5C7QrtC22wG3UHk-ZeQu ndtvSoClrl8zuJvQ9IEFq4fp1R f9veiteln48_97uHrMtszFzeyCiB SQOpYnTy36MacmUFCx2ppFvBej56Mmc8Qdb8ZfRjqZnsIAdk8Lv_e6czmhEembNmZCMxLMtQ04ddtG WbvrnjyD