**COMPUTER TECHNOLOGY COURSE DESCRIPTION**

**WHAT IS THE COURSE ABOUT?**

Technology and technological developments have given rise to profound changes in society, transforming how information is accessed and processed, communicated with others and how problems are solved.

In XV. Gimnazija students will be offered subjects *Computer technology* (during MYP 4) and *Design technology* ( during MYP 5).

*Computer technology* aims to provide the means and the context to help students become skillful problem solvers, who can appreciate the role of ICT and technology in general in everyday life and society and who can respond critically and resourcefully to real-life challenges.

The course aims to:

• challenge all students by providing opportunities for different needs and learning styles

• encourage students to explore the role of technology in both historical and contemporary contexts

• contribute to raising students’ awareness of their responsibilities as world citizens when making decisions and taking action on technology issues.

During the course, students are expected to solve problems through the creation of technological products/solutions. Students investigate problems and use the technology design cycle as a tool to design, plan, create and evaluate products/solutions. The design cycle is a model and it is intended to be the central tool to help students to create and evaluate products/solutions in response to challenges. A product/solution can be a model, prototype, product or system that students have generated independently.

**The school offers two lessons per week in the first semester and three lessons per week in the second semester. The course consists of three technological projects.**

**TOPICS:**

The course is divided in several units which are technological projects. Computer technology is different from Computer Science- even though throughout the projects students will learn certain computer skills, the emphasis is on following the correct procedure while working on the project.

**MYP4**

**Project 1: Multimedia Presentations**

* considering different communication channels (multimedia)
* introducing the role of a designer and design cycle model
* basic information and concepts of design cycle (outline the design brief, ask relevant questions for the investigation, identify appropriate sources of information, collect and select information, begin to analyze it, formulate design specification, design tests to evaluate the product/solution against the design specification, generate several feasible designs that meet the design specification, compare the designs against the design specifications and identify the pros and cons of each design, select one design and explain its choice, construct a plan to create the product/solution that has a series of logical steps, follow the plan to produce the product/solution with minimal guidance, review the plan and explain any changes to the plan when necessary, carry out tests to compare the product/solution against the design specification, consider the success (and/or failure) of the product/solution in an objective manner based on testing, own views and the views of the intended user, reflect on the performance at each stage of the design cycle)
* presentation techniques
* presentation tools (formal presentation files production)
* word processing tools – basic skills
* word processing tools – advanced skills

**Project 2: Multimedia Learning Aid**

* studying an area and developing the appropriate learning aid
* using, with minimal guidance, design cycle model to produce the learning aid
* basic programming concepts, HTML code
* introduction and basic concepts of DTP
* word processing tools – advanced skills
* spreadsheet application
* presentation tools (formal presentation files production)

**Project 3: Lifestyle and Technology**

* considering how modern technology interfere with our lifestyle (with emphasis on health and social aspects of our lives)
* using, independently, design cycle model to produce a website
* HTML programming, basic CSS programming
* HTML programming, CSS programming, basic JavaScript programming

**ASSESSMENT:**

Every project consists of 5 stages of the design cycle ( Investigation, Design, Plan, Creation and Evaluation). Each stage during a project is graded i.e. points are awarded from minimum 0 to maximum 6 points. Students will be given instructions at the beginning of each project and all deadlines must be met. Late projects will not be accepted and will be graded with 0 points.

The following assessment criteria have been established by the IBO for computer technology:

Criterion A: Investigate- 0-6 points

Criterion B: Design – 0-6 points

Criterion C: Plan – 0-6 points

Criterion D: Create – 0-6 points

Criterion E: Evaluate – 0-6 points

Criterion F: Attitudes in technology- 0-6 points

Students are assessed according to the interim (MYP4) descriptors for grading.

At the end of the school year points are given in each criteria taking into account achievements in all individual tasks (formative and summative assessment).

Final grades are derived according to the grade boundaries provided by the IBO:

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| **COMPUTER TECHNOLOGY** |
| **Grade** | **BOUNDARIES** |
| **1** | **0 – 5** |
| **2** | **6 – 9** |
| **3** | **10 – 15** |
| **4** | **16 – 21** |
| **5** | **22 – 26** |
| **6** | **27 – 31** |
| **7** | **32 – 36** |