

**Educational requirements for the IB grade exam
for students choosing the COMPUTER SCIENCE subject
in 1349 IB School in Poznań**

| The scope of material: | Required skills: |
|-------------------------------|---|
| 1. Programming fundamentals | <ul style="list-style-type: none"> • construct flowcharts of algorithms using appropriate sequences, selections/conditionals, loops and operators to solve a range of problems, to fulfil a specific requirement • implement algorithms using a pseudocode to solve a range of problems • analyse existing flowcharts of algorithms with a set of input values and finding outputs |
| 2. Computer system | <ul style="list-style-type: none"> • describe the different components within a computer and the function of those components • describe the functions of an operating system |
| 3. Data representation | <ul style="list-style-type: none"> • describe the rationale for using the binary number system in digital computing • convert between binary, hexadecimal and decimal number systems • operations (addition and subtraction) on binary number system |
| 4. Network fundamentals | <ul style="list-style-type: none"> • characteristics of different network devices and transmission media • characteristics of different types of network |