# Units of learning outcomes: Support plate

| Name of unit | **Producing a support plate** |
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| Name of qualification / of the branch to which the unit relates | Fields of education: Mechanical engineering<br><br>Professional qualification: CNC operator |
| The level of qualification according to the EQF | 4 |
| Length (hours) | 40 |
| Expected learning outcomes (knowledge, skills, independence and responsibility) | Graduated:<br>a) Reads a technical drawing and technical documentation and gains technical and spatial imagination and perception<br>b) Understands the raw measures<br>c) Knows and applies the rules of the profession and production technology<br>d) Plans the model and draws it in CAD Fusion 360<br>e) Knows the technological possibilities of CNC machine: types, purposes and features of individual tools<br>f) Selects the CNC machine and material: knows the properties and choose the proper material for production<br>g) Independently uses the functionalities of the programming software<br>h) Programs the lathe and milling machine in Mach3 (Fusion 360 simulation)<br>i) Determines the optimal processing operations and economical material |

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|---|---|
| | management |
| | j) Uses and sets the control unit: G-function, M function, coordinate system, machine reference points and tools |
| | k) Sets the CNC machine: clamping, tool and zero point settings |
| | l) Identifies the limiting factors that may occur during production process |
| | m) Prepares the starting material (custom sawing to initial size) |
| | n) Transfers the program (G-code) to the machine control unit |
| | o) Uses the measuring tools and checking tools |
| | p) Produces the workpieces according to drawings and programs |
| | q) Controls the quality, measures the workpiece and determines whether it meets the tolerances and quality of processing |
| | r) Observes the principles of occupational safety, health protection and fire protection at work |
| | s) Takes care of the quality of his/her work |
| | t) Handles material economically |
| | u) Communicates with co-workers in the language of the country |
| | v) Cooperates in the production of orders with others |
| | w) Acts in accordance with environmental protection requirements |

## Evaluation form (Personal Transcript)

| Name of unit | Producing a support plate | | | |
|---|---|---|---|---|
| Name | | | | |
| Final competences | Performed under supervision | Performed separately | Pass (date and signature) | Fall (date and signature) |
| Reads a technical drawing and technical documentation and gains technical and spatial imagination and perception | | | | |
| Understands the raw measures | | | | |
| Knows and applies the rules of the profession and production technology | | | | |
| Plans the model and draws it in CAD Fusion 360 | | | | |
| Knows the technological possibilities of CNC machine: types, purposes and features of individual tools | | | | |
| Selects the CNC machine and material: knows the properties and choose the proper material for production | | | | |
| Independently uses the functionalities of the programming software | | | | |
| Programs the lathe and milling machine in Mach3 (Fusion 360 simulation) | | | | |
| Determines the optimal processing operations and economical material management | | | | |
| Uses and sets the control unit: G-function, M function, | | | | |

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|---|---|---|---|---|
| coordinate system, machine reference points and tools | | | | |
| Sets the CNC machine: clamping, tool and zero point settings | | | | |
| Identifies the limiting factors that may occur during production process | | | | |
| Prepares the starting material (custom sawing to initial size) | | | | |
| Transfers the program (G-code) to the machine control unit | | | | |
| Uses the measuring tools and checking tools | | | | |
| Produces the workpieces according to drawings and programs | | | | |
| Controls the quality, measures the workpiece and determines whether it meets the tolerances and quality of processing | | | | |
| Observes the principles of occupational safety, health protection and fire protection at work | | | | |
| Takes care of the quality of his/her work | | | | |
| Handles material economically | | | | |
| Communicates with co-workers in the language of the country | | | | |
| Cooperates in the production of orders with others | | | | |
| Acts in accordance with environmental protection requirements | | | | |

Name and signature of the representative of the receiving organization responsible for the evaluation:

Signature of the pupil:

Date and stamp of the receiving organization: