Professional skills competition for metalworking and mechanical engineering students of national vocational education institutions

REGULATIONS

The competition is organized by:
National association with cooperation of..

The purpose of the competition: to promote the development of students' theoretical knowledge and professional skills in metalworking and mechanical engineering industry professions, in cooperation with industry companies.
These skills are:

-the ability to cooperate with the company in the development of tender work;
-ability to demonstrate their skills, knowledge and achievements;
-correct understanding and accurate implementation of the drawing and the written information attached to it,
-planning the optimal sequence of work operations, choosing and using appropriate work techniques, materials and tools,
-effective planning of one's working time,
-ability to work individually and in a team,
-ability to observe work safety and protection in the execution of work and during the competition;
-creativity and the ability to apply it during the competition.

Participants of the competition: students of national vocational secondary education institutions in the field of metalworking and mechanical engineering industry.

National competition:
- A team consisting of 3 students from the same qualification can participate in the competition: mechanical engineering technician, CNC setter or welder, one of students is the team captain.
- Each team announces a team name.
- Each team is assigned a teacher responsible for the team.
- Each educational institution can organize one or two teams from each qualification in the competition.
- The competition will take place between students of the same qualification.
- Language of the competition: national.

National competition:
The competition will take place in 3 parts:

1. Presentations of the competition work. Before the competition, each team has to make a freely chosen product using 5 to 15 components, applying the knowledge, skills and technologies that are in the curriculum of the specific qualification. The work of the competition must be presented with a pre-prepared video demonstration (1-3 min), in which the stages of product development (planning, material selection, processing, quality control, measurement) are filmed and in which the team explains what materials were used, the purpose or usage of the product, the company's involvement, manufacturing technological process and compliance with work safety and protection during product manufacturing. The competition work must be created by a team,

involving the company in the creation of the product. The video is sent 3 working days before the competition to xxxx. The work of the competition is delivered to xxx on the day of the competition. Maximum number of points: 50.

2. Theoretical part: questions in the form of tests and open questions on knowledge relevant to the qualification. Maximum number of points: 20.
3. Practical part: Practical part is performed only by the team captain:
   3.1. CNC setters perform the creation of the part with processing program on the FANUC CNC simulator;
   3.2. The mechanical engineering technician describes the sequence of technological processes and operations of manufacturing the product, according to the drawing;
   3.3. A welder performs a practical welding task.
   Maximum number of points: 30.

Each educational institution appoints a **responsible teacher** who:

- applies the team - three students from one qualification - for participation in the competition;
- before the competition, provides support to the team for the development of the competition work and ensures cooperation with the company (material for the competition work, ideas, consultations);
- monitors compliance with work safety and protection requirements during the production of competition work;
- ensures delivery of the completed competition work to xxx on the day of the competition.

Competition evaluation:

- Evaluation criteria for the competition work: 1) creativity of the product idea, 2) accuracy of the manufactured product, 3) attractiveness of the video, 4) applicability (the product must be practically applicable) 5) complexity of product manufacturing 6) compliance with work safety and protection requirements when manufacturing the object 7) cooperation with the company. Maximum number of points: 50.
- Theoretical part: points for correct answers. Maximum number of points: 20.
- The performance of the practical work will be evaluated by experts by filling in detailed objective and subjective evaluation sheets. Maximum number of points: 30.
- All points are added up. The team with the highest number of points wins each qualification.

Places and time
of the competition: the professional skills competition for metalworking and mechanical engineering students of vocational education institutions will take place: xxx

The organizers provide:

- Materials for performing the contest tasks in person.
- Rooms for in-person evaluation, evaluation sheets, measuring instruments and other accessories for evaluation commissions.
- Catering for competition teams and responsible teachers.
- Transport costs, according to the submitted fuel receipts or public transport tickets.
- Accommodation costs, if necessary.

Educational institution provides its team(s) with:

- Workplace, tools and equipment, materials for the preparation of the competition work;
- Delivery of the team and the competition task to the competition venue - xx.

Awarding of contest winners:

- All participants will receive letters of thanks from association for participating in the competition.
- The first, second and third place in each qualification receive prizes (to be specified) and medals

provided by the sponsors of the competition.

Application for participation in the contest:
Online registration of the contest teams: **until xxxx (including)**
Meeting with the responsible educators on the organizational and technical issues of the contest on **online xxxx**:

Responsible persons and contacts xxx

The competition was created under Erasmus+ program project "Baltic VET competition for smart growth" (SmartGrowth)**,** project No. 2021-1-LV01-KA220-VET-000025155.