

# Regulation for National Selection

## EuroSkills Graz - Web Development skill competition

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Check the website for information [HERE](#).

#### I. [EuroSkills](#) Graz – European Competition

[EuroSkills](#) is a vocational skills contest staged every two years in the form of European championships. In 2020, [EuroSkills](#) will take place in Austria for the first time in the competition’s history – the venue will be Graz. Around 600 contestants from eight vocational categories will meet in Graz to compete for victory in 45-50 skills and trades. They will be accompanied by up to 1,500 coaches and will attract about 100,000 visitors to Graz.

The focus is on the outstanding achievements of young greatest talented skilled professionals up to 25 years in about 45 European occupations. Some 600 active participants compete in vocational categories from the industrial, craft and service sectors.

The participants will be competing for the [EuroSkills](#) title in about 45 different trades or skills in the following categories:

1. Construction and Building Technology
2. Manufacturing and Engineering Technology
3. Information and Communication Technology

4. Creative Arts and Fashion
5. Social and Personal Services
6. Transportation and Logistics
7. Demonstration and Presentation Skills

[WorldSkills Europe](#) is the body ultimately responsible for the European vocational skills championships, [EuroSkills](#). It is a non-profit member association founded in 2007 and headquartered in the Netherlands. [WorldSkills Europe](#) raises awareness of the importance of high-quality vocational education and training for Europe, and of the need for highly trained and skilled workforces in Europe, in order to make the European Union even more competitive. It currently has 30 member nations, including almost all EU members, European Economic Area countries and the Russian Federation.

## II. WorldSkills Romania

Romania will participate with the delegation selected by WorldSkills Romania at [EuroSkills](#) Graz in 2020.

[WorldSkills Romania](#) Foundation is part of [WorldSkills International](#) – a global movement in VET, with operations in 79 countries. WorldSkills vision is to improve our world with the power of skills. WorldSkills mission is to raise the profile and recognition of skilled people and show how important skills and professional qualifications are in achieving economic growth and personal success.

[WorldSkills Romania](#) is a non-profit organization aiming to develop excellency in skilled trades through vocational education and training, by sharing good practices, and by promoting VET system as an opportunity for personal success but also for the region's economic development. The Foundation's activity is based on the principles of non-discrimination and equal opportunities.

WorldSkills acts as a hub for skills excellence and development, following its vision and mission through:

- Organizing skills competitions
- Researching VET and labor market
- Promoting career development in skilled trades
- Providing learning opportunities for students, teachers and staff of the VET schools
- Promoting entrepreneurship as an employability option for young people

[WorldSkills Romania](#) has been operating since the beginning (2016) under a formal partnership with the Ministry of Education and with the National Center for TVET Development, being able to cooperate with any of the VET schools at national level, involving students, teachers and staff in its activities.

[WorldSkills Romania](#) works directly with the business community as well, supporting companies to develop partnerships with the VET schools, aiming to bridge the skills gap and the labor gap. The strategic national partner of [WorldSkills Romania](#) is [The KPI Institute](#). [WorldSkills Romania](#) activity is based on WorldSkills International Standards in more than 52 skills.

### III. Web Development skill competition

Web Development encompasses many different skills and disciplines in the production and maintenance of websites. The skills required of a web developer are diverse, often to the point it is difficult for a developer to excel in all aspects. As a result, a team may cover the Web Design and Development process, with each member of the team having their own strengths, specialties and role in the development process.

Web Development involves implementing specific solutions that follow the business rules and objectives outlined by the client. Web Developers develop a professional relationship with their clients, interacting with them in order to develop a deep understanding of the requirements and convert these into a website specification.

Based on the website planning and design, the Web Developer integrates the website with third party tools and platforms. During the development process the Web Developer implements the design, using their programming skills in order to create dynamic functionalities, test and debug the website using a variety of devices.

Strong design and communication skills, coupled with research techniques and a grasp of target audiences, markets and trends, will ensure initial client satisfaction and credibility for the Web Designer. Having completed the website planning and design, the Web Designer then integrates the website with third party tools and platforms.

During the development process Web Designers implement the design, use their programming skills in order to create dynamic functionalities, test, and debug the website using a variety of devices. The current trend is to also integrate the website with social media to take advantage of the online marketing platforms available. All these skills may apply equally to the re-design or an upgrade of an existing website.

A Web Developer has many employment opportunities. This can range from being a self-employed freelancer or an entrepreneur to being employed by advertising agencies and web development companies as well as many different other types of organizations.

Web Developer positions may be broad in scope or specialize in an area such as Digital User Experience Implementation, Front End Development, Back End Development, Content Management Systems Developer as well as Client and Project Management. Whichever role a Web Developer chooses to specialize in they will need to have access to ICT facilities, open source libraries and frameworks.

High performing Web Developers may have broad or specialist web-related skills. They must understand artistic values; have solid programming skills complemented with some user interface design skills and take personal responsibility for being constantly at the forefront of trends and web technology.

They must also be responsive to clients and to have the ability to work in structured and unstructured teams and groups. These qualities enable the Web Developer to contribute and take advantage of this rapidly developing aspect of modern communications technology.

#### IV. Calendar

[WorldSkills Romania](#) will select the delegation for [EuroSkills](#) Graz. The competitors will participate in the national selection, they will be prepared for [EuroSkills](#) by experts through an internship and then they will participate in the European competition.

[WorldSkills Romania](#) organizes the national selection for the [EuroSkills](#) Graz 2020 European Olympics, Web Development section. The selection takes place following a practical online test (Web Development) and an intensive training period with the WorldSkills Romania expert in the field of Web Development.

Stage	Activities – Web Development	Date/Period
National Selection	Registration in the national selection	17.01-10.02.2020
	List of participants selected for the practical test	15.02.2020
	Practical Test (online)	24.02-26.02.2020
	List of participants selected for interviews	28.02.2020
	Interviews	02-04.03.2020
	List of participants selected for internship	06.03.2020
Intensive training for the competition	Internship at The KPI Institute	16.03-15.05.2020
	Selection of the candidate which will attend EuroSkills Graz	15.05.2020
	EuroSkills Graz	16-20.09.2020

#### V. National Selection for Web Development skill competition

##### a) Profile of the competitor:

- young people up to 25 years old (born after 1<sup>st</sup> of January 1995)
- young people passionate about Web Development
- young people with experience in the field of Web Development

##### b) Registration

The competitors register through an online form. The form can be found [HERE](#).

##### c) Practical Test (online)

The competitors will receive on their e-mail addresses the topics for the test. The topics will be based on the sections from the table from chapter VI. *The standard of web development in the national selection.* The topics will be practical exercises and the competitors have 48 hours to send the solution to the email address [larisa.panait@worldskills.ro](mailto:larisa.panait@worldskills.ro).

The test will start on *24.02.2020 at 10:00 am* and will end on *26.02.2020 at 10:00 am*.

##### d) Interview

Following the practical test, the participants will be selected for interviews. During the interview, the competitors’ availability, motivation and communication skills in English will be considered.

**e) Internship at The KPI Institute**

After the interviews, 3 people will be selected for the internship organized by [The KPI Institute](#) in Romania. The internship will last 2 months, during which the participants will be preparing for the European competition, with the help of the experts.

During the internship period, the participant will dedicate approx. 20h of training / week (flexible program).

At the end of the internship, based on the evolution and development during the internship period, the candidate for the Romanian delegation to [EuroSkills](#) Graz will be chosen.

**VI. The standard of web development in the national selection**

Each skill competition is intended to reflect international best practice as described by the Standards Specification, and to the extent that it is able to.

In the skill competition, the assessment of knowledge and understanding will take place through the assessment of performance. There will not be separate tests of knowledge and understanding.

The Standards Specification is divided into distinct sections with headings and reference numbers added.

Each section is assigned a percentage of the total marks to indicate its relative importance within the Standards Specification. The sum of all the percentage marks is 100.

SECTION		RELATIVE IMPORTANCE %
<b>1</b>	<b>Work organization and self-management</b>	<b>5</b>
	The individual needs to know and understand: <ul style="list-style-type: none"> <li>•Principles and practices that enable productive teamwork</li> <li>•The principles and behavior of systems</li> <li>•The aspects of systems that contribute to sustainable products, strategies and practices</li> <li>•How to take initiatives and be enterprising in order to identify, analyze and evaluate information from a variety of sources</li> <li>•Identify multiple solutions to a problem and offer them as options against time, budget, and other constraints.</li> </ul>	
	The individual shall be able to: <ul style="list-style-type: none"> <li>•Troubleshoot common web design and development problems</li> <li>•Take into account time limitations and deadlines</li> <li>•Debug and handle errors</li> <li>•Use a computer or device and a range of software packages</li> <li>•Apply research techniques and skills to keep up to date with the latest industry guidelines</li> </ul>	

	<ul style="list-style-type: none"> <li>• Plan each day's production schedule according to available time</li> <li>• Include linked images, fonts, native files and production file format when archiving</li> <li>• Use version control systems</li> </ul>	
<b>2</b>	<b>Communication and interpersonal skills</b>	<b>5</b>
	<p>The individual needs to know and understand:</p> <ul style="list-style-type: none"> <li>• How to solve communication problems including identifying the problem, research, analysis, solution generating, prototyping, user testing and outcome evaluation</li> <li>• Design concepts and techniques including wire framing, storyboarding, and creating flowcharts</li> <li>• Software design concepts and techniques including flowchart and ER diagrams</li> </ul>	
	<p>The individual shall be able to:</p> <ul style="list-style-type: none"> <li>• Read and understand specifications documents</li> <li>• Deliver a product that responds to client requirements and specification</li> <li>• Gather, analyze and evaluate information</li> <li>• Interpret standards and requirements</li> <li>• Match client requirements</li> <li>• Present a concept to meet business requirements</li> </ul>	
<b>3</b>	<b>Website design</b>	<b>20</b>
	<p>The individual needs to know and understand:</p> <ul style="list-style-type: none"> <li>• How to follow design principles and patterns in order to produce aesthetically pleasing and creative design</li> <li>• Issues related to the cognitive, social, cultural, technological and economic contexts for design</li> <li>• How to create and adapt graphics for the web</li> <li>• Different target markets and the elements of design which satisfy each market</li> <li>• Protocols for maintaining a corporate identity, brand and style guide</li> <li>• The limitations of Internet enabled devices and screen resolutions</li> </ul>	
	<p>The individual shall be able to:</p> <ul style="list-style-type: none"> <li>• Create, analyze develop visual response to communication problems, including understanding hierarchy, typography, aesthetics and composition</li> <li>• Create, manipulate and optimize images for the internet</li> <li>• Identify the target market and create a concept for the design</li> <li>• Create responsive designs that function correctly on multiple screen resolutions and/or devices</li> <li>• Transform an idea into an aesthetically pleasing and creative design</li> <li>• Critique draft concepts, color and typography choices</li> </ul>	
<b>4</b>	<b>Website layout</b>	<b>20</b>
	<p>The individual needs to know and understand:</p> <ul style="list-style-type: none"> <li>• World Wide Web Consortium (W3C) standards for HTML and CSS</li> <li>• Positioning and layout methods</li> <li>• Usability and interaction design</li> </ul>	

	<ul style="list-style-type: none"> <li>•Accessibility and communication for users with special needs</li> <li>•Cross browser compatibility</li> <li>•Search Engine Optimization (SEO)</li> <li>•How to embed and integrate animations, audio and video where needed</li> </ul>	
	<p>The individual shall be able to:</p> <ul style="list-style-type: none"> <li>•Create code that conforms and validates to the W3C standards</li> <li>•Create accessible and usable websites for variety of devices and screen resolutions</li> <li>•Use CSS or other external files to modify the appearance of the website</li> <li>•Use CSS pre/post-processors</li> <li>•Create and update websites for user experience and to assist with search engine performance</li> </ul>	
<b>5</b>	<b>Client-side functionality</b>	<b>20</b>
	<p>The individual needs to know and understand:</p> <ul style="list-style-type: none"> <li>•JavaScript</li> <li>•How to integrate libraries, frameworks and other systems or features with JavaScript</li> </ul>	
	<p>The individual shall be able to:</p> <ul style="list-style-type: none"> <li>•Create website animations and functionalities to assist in context explanations and adding visual appeal</li> <li>•Create and update JavaScript code to enhance a websites functionality, usability and aesthetics</li> <li>•Manipulate data and custom media with Java script</li> <li>•Create modular and reusable JavaScript code</li> </ul>	
<b>6</b>	<b>Server-side functionality</b>	<b>20</b>
	<p>The individual needs to know and understand:</p> <ul style="list-style-type: none"> <li>•Object-oriented PHP</li> <li>•Open Source server-side Libraries and Frameworks</li> <li>•How to design and implement databases with MySQL</li> <li>•FTP (File Transfer Protocol) server and client relationships and software packages.</li> <li>•How to manage data exchange between server and client systems</li> <li>•Software design patterns (E.g. MVC (Model View Controller))</li> <li>•Web application security</li> </ul>	
	<p>The individual shall be able to:</p> <ul style="list-style-type: none"> <li>•Manipulate data making use of programming skills</li> <li>•Protect against security exploits</li> </ul> <p>Integrate with existing code with API (Application Programming Interfaces), libraries and frameworks</p>	
<b>7</b>	<b>Content management systems</b>	<b>10</b>
	<p>The individual needs to know and understand:</p> <ul style="list-style-type: none"> <li>•Benefits and limitations of open source Content Management</li> <li>•Systems</li> <li>•How to find, choose and implement suitable plugins / modules</li> <li>•How to implement client-side functionalities to CMS web sites</li> </ul>	

	<ul style="list-style-type: none"> <li>• Understand the need for maintenance and updates to CMS plugins and modules for security</li> </ul>	
	The individual shall be able to: <ul style="list-style-type: none"> <li>• Install, configure and update Content Management Systems</li> <li>• Install, configure and update CMS plugins / modules</li> <li>• Create custom themes / templates for Content Management</li> <li>• Create custom plugins / modules</li> </ul>	
	<b>Total</b>	<b>100%</b>

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