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FAKULTA TELESNEJ
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v Bratislave



MAIÊUTICA Cooperativa de Ensino Superior, C.R.L.



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Project C-TRENDS is completed

On 30 June the project is completed, the implementation of the planned activities and outputs has been delivered.

We can conclude that the project's key objectives have been achieved:

- Contribute towards sustaining trainers in their knowledge, skills, and competence development;
- Exchange expertise and good practice at the expert level and identify new trends in cycling;
- Share existent training tools & methods;
- Create synergies & cooperation at the international level among organizations that excel in cycling;
- Jointly design, develop, and test materials that will enhance the above mentioned;
- To promote the benefits of cycling.

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[Digital Platform](#)

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ABOUT

[Project Overview](#)

[Aim & Objectives](#)

[Outputs](#)

[Partners](#)

Training should adapt to the athlete's personality, which enables him/her to achieve the highest individual performance by developing the functional possibilities of the cyclist, ensuring a perfect mastery of rational techniques, developing his/her moral and wilful qualities, enabling him/her to gain practical and theoretical knowledge and influence the versatile development of his/her personality. Cycling training is characterized by extraordinary stress, high volume, and intensity, which only exceptionally disposed of individuals, can handle. The difficulty of training requires the athletes to adapt their living regime to training and competition conditions.

The innovation of this project lies in:

1. identification of the newest trends in sports theory and practice;
2. joint collaboration among experts from different countries and settings;
3. co-production of innovative training content using digital technologies.

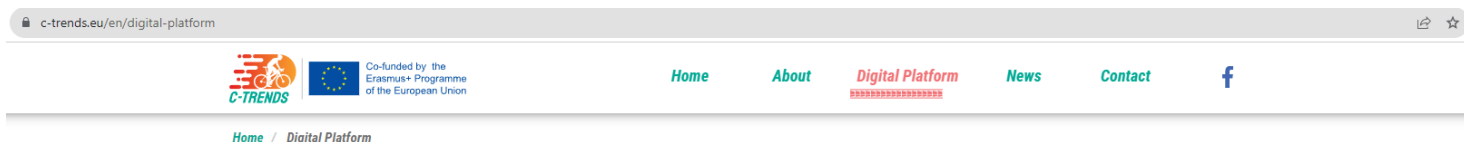
Project C-Trends is a European project, which involves six partners from **different geographical areas**, representing a very diverse mix between central and southwestern European and Mediterranean organisations active in the field of cycling. They have all joined the **partnership to collaborate internationally to co-create different project outputs** that will benefit them all. This European collaboration is based not only in the exchange of expertise, trends, best practices to get an insight into international cycling innovations but also in the production of digitalised outputs that will be used by their organisations to provide education and training to their members, targets of this project.

This collaborative partnership gathers six European partners: two cycling federations, a Faculty of Physical Education and Sports, one sports club, one centre for performance excellence in cycling and a leading research & development centre.



The project aims at improving the knowledge, skills and competences of both trainers and cyclists of all ages through:

- a) elaboration of an e-learning platform containing digital tools for both, trainers and cyclists of all ages and performance levels;
- b) design, development and testing performance software for trainers and professional cyclists.



DIGITAL PLATFORM



[Visit the platform](#)

The digital platform represents the innovation of this project, which lies in:

- 1) identifying the latest trends in sport theory and practice;
- 2) the joint collaboration of experts from different countries and backgrounds;
- 3) co-production of innovative educational content using digital technologies.

The use of digital technologies in education has become a standard in education, training, science and research not only in the world of education and work, but also in sports education.

Trends in education focus on the effective use of digital technologies and digitalised education & training contents make it accessible. The digitalisation of education materials is a global trend and at the same time, a logical step to advance in this highly digitalised age. Digital education contents provide access and engage a wide spectrum of sensory and cognitive functions. It represents an attractive and effective form of teaching, promotes clarity and links theoretical knowledge with practical life. We don't aim at replacing the traditional way of teaching but we want to benefit from the advantages of modern technologies where their use make sense. Our goal is to achieve synergies between traditional and online education and this is highly innovative in our education and training of our trainers.

C-TRENDS platform brings together project outputs in one place:

- IO1 as Basic level
- IO2 as Advanced level
- IO3 as OptiCycle software

All parts contain information for five disciplines in cycling (road cycling, track cycling, mountain biking, cyclocross, cycling for the disabled) and are available in six languages: English, Slovak, Spanish, Portuguese, Hungarian, Greek.

Basic level contains:

1. Characteristics of cycling and cycling sports
2. Structure of sports performance
3. Biomechanics

Advanced level contains:

1. Sports anatomy
2. Physiology of physical exercise
3. Human / athlete ontogenesis in terms of fitness skills

OptiCycle

Evaluative training software for cyclists developed within the project (IO3). This software is based on the numerical expression of the training

IO1 – Digital Platform & Interactive Resources. Outcome provides trainers and cyclists of all ages and performance levels with OER in five disciplines and containing relevant and updated information in different areas of cycling.

IO2 – Methodological Guide for Trainers: contains methodological guidelines for trainers and professional cyclists to improve their training and sports performance.

IO3 – OptiCycle Software: consists in software development using data mining to help professional athletes to better and more precisely plan their training in view of maximizing their performance.

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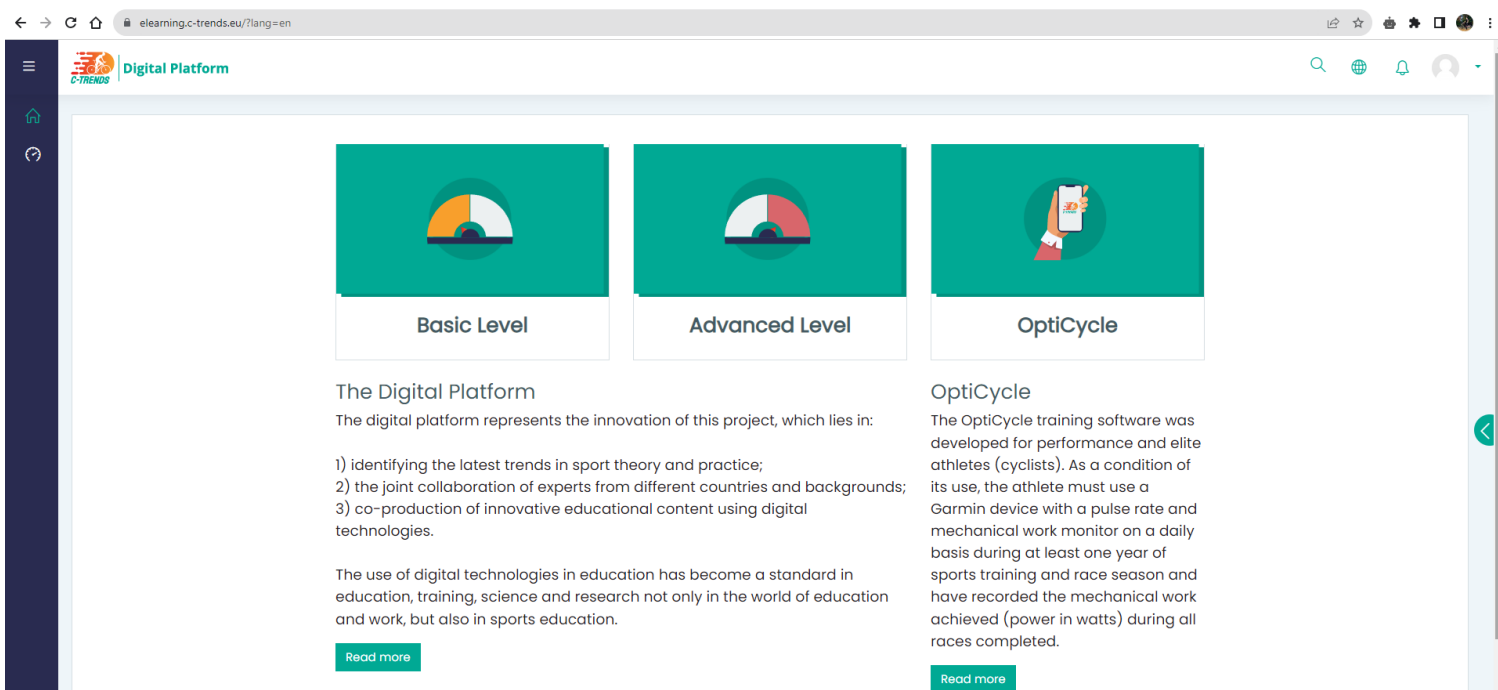
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- IO1 as Basic level
- IO2 as Advanced level
- IO3 as OptiCycle software

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The screenshot shows a web browser displaying the 'Digital Platform' page. The page features three main sections: 'Basic Level', 'Advanced Level', and 'OptiCycle'. Each section has a corresponding icon and a 'Read more' button. The 'Basic Level' and 'Advanced Level' sections describe the digital platform's innovation and its use in education and sports. The 'OptiCycle' section describes the training software developed for performance and elite athletes, which requires the use of a Garmin device for monitoring pulse rate and mechanical work.






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Digital Platform

Basic Level

Home Courses Basic Level

Course categories: Basic Level ▾

 <p>1. Characteristics of cycling and cycling sports</p> <p>Access</p>	 <p>2. Structure of sports performance</p> <p>Access</p>	 <p>3. Biomechanics</p> <p>Access</p>	 <p>4. Material equipment for cycling sports</p> <p>Access</p>
 <p>5. Setting the optimal position of the cyclist</p> <p>Access</p>			
















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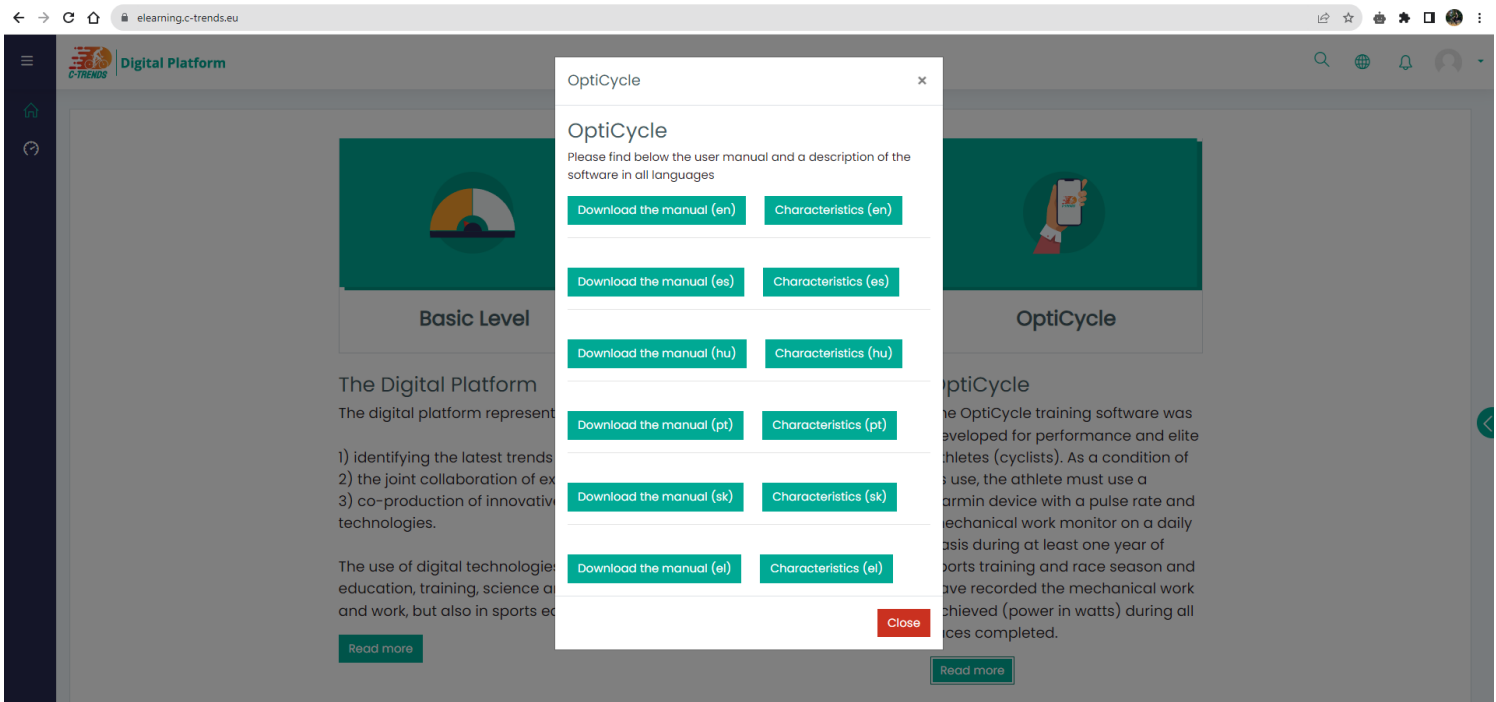
Digital Platform

Advanced Level

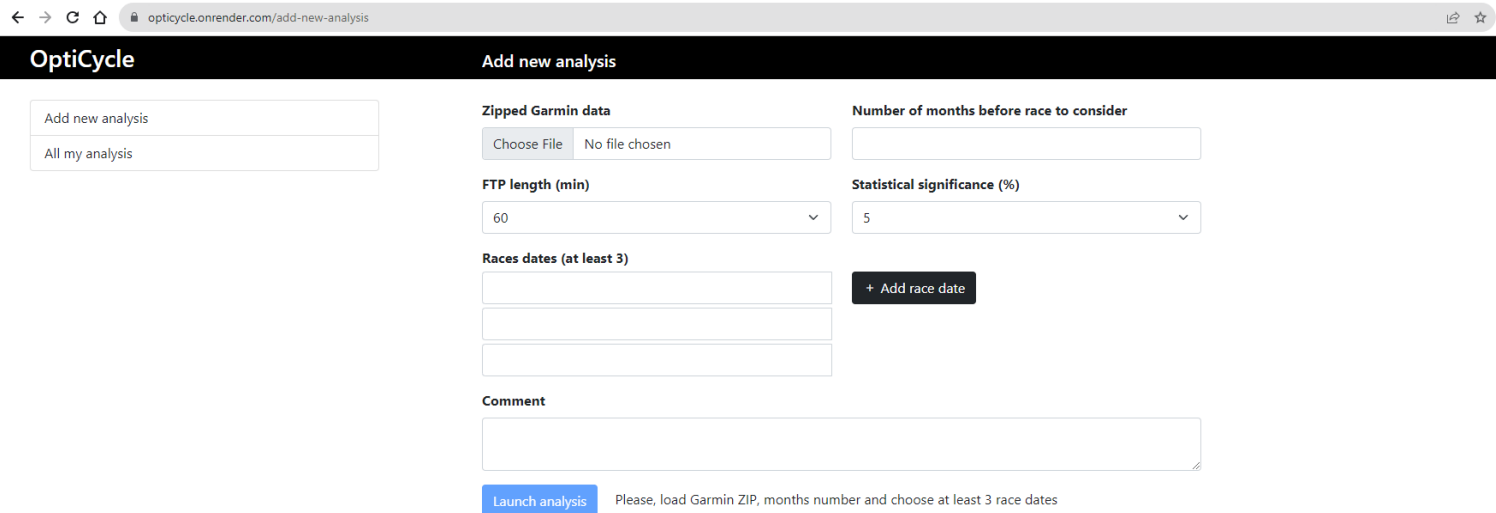
Home Courses Advanced level

Course categories: Advanced Level ▾

 <p>1. Sports anatomy</p> <p>Access</p>	 <p>2. Physiology of physical exercise</p> <p>Access</p>	 <p>3. Human / athlete ontogenesis in terms of fitness skills</p> <p>Access</p>	 <p>4. Sports nutrition</p> <p>Access</p>
 <p>5. Doping in cycling sports</p> <p>Access</p>	 <p>6. Sports psychology</p> <p>Access</p>	 <p>7. Cycling coach</p> <p>Access</p>	 <p>8. Structure of sports performance in individual cycling sports</p> <p>Access</p>
 <p>9. Sports training</p> <p>Access</p>	 <p>10. Overtraining and sports injuries</p> <p>Access</p>	 <p>11. Regeneration in cycling sports</p> <p>Access</p>	 <p>12. Planning the training process in cycling sports</p> <p>Access</p>
 <p>13. Registration of training and racing load and special cycling motor tests</p> <p>Access</p>	 <p>14. Evaluation of the effectiveness of the training load in cycling sports</p> <p>Access</p>	 <p>15. Medical examination for cyclists</p> <p>Access</p>	



The screenshot shows the 'Digital Platform' website. A modal window titled 'OptiCycle' is open, displaying a list of download links for the user manual and characteristics in various languages: English (en), Spanish (es), Hungarian (hu), Portuguese (pt), Slovak (sk), and Italian (it). The background content includes a 'Basic Level' section and an 'OptiCycle' section with a 'Read more' button.



The screenshot shows the 'OptiCycle' 'Add new analysis' form. It includes the following fields and options:

- Add new analysis** (text input)
- All my analysis** (text input)
- Zippered Garmin data** (file upload field, currently 'No file chosen')
- Number of months before race to consider** (text input)
- FTP length (min)** (dropdown menu, currently '60')
- Statistical significance (%)** (dropdown menu, currently '5')
- Races dates (at least 3)** (three text input fields and a '+ Add race date' button)
- Comment** (text area)
- Launch analysis** (button)

Below the 'Launch analysis' button, there is a note: "Please, load Garmin ZIP, months number and choose at least 3 race dates".

To achieve its objectives, the project consortium implemented a total of 58 dissemination activities both physically (open-day events, workshops, informative sessions, presentations, conferences) and online (social media posts, media articles, press releases, newsletters, broadcasting), with potentially reaching 495 546 people and additional 144 000 000 (from the broadcasting and TV coverage on Eurosport) directly or indirectly at a local, regional, national and European level including amateur and professional cyclists and athletes, coaches and trainers in the field (beginners and advanced), internal and external sports experts, policymakers and stakeholders, academics, university staff, students, youth and the general public.



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CYCLING TRENDS IN EDUCATION, TRAINING AND DIAGNOSIS



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