

# STEM TEACHING: RELEVANT FOR OUR STUDENTS AND FOR OUR SOCIETY

## ICSE Academy workshop series

<https://icse.eu/icse-academy/>

The focus of this workshop series is bringing participants up to date in research and teaching in the STEM subjects (Science, Technology, Engineering and Mathematics) in connection with European priorities such as fostering sustainability, digital skills and intercultural learning. The European workshop series aims at refreshing and deepening the knowledge of meaningful and relevant educational practices. Topics will include inquiry-based learning and interdisciplinarity, cultural diversity and inclusion, curriculum development and assessment in Europe, and the use and impact of technology on STEM education.

The European workshop series will offer a blend of seminars and workshops in the fields of primary and secondary education. The program will be tailored towards the diverse interests of teachers and student-teachers. The workshop series is organized by the ICSE Academy (International Centre for STEM Education).

### Clusters of topics

The program of the workshop series is organized in four clusters. Each cluster address one main topic. Participants are expected to at least follow all sessions related to a cluster. Student-teachers are invited to attend the whole course. The four clusters are:

1. Learning by inquiry, Socio-scientific issues and Interdisciplinarity
2. Diversity and inclusion in STEM
3. STEM in a digital era
4. Assessment/STEM in Europe

### Working formats

The sessions will be provided online and will have a very interactive character with various working formats. Most sessions will consist of a general introduction followed by group work, either in country groups or in mixed groups. Local teams have the opportunity to join together and follow the course from one room. In between sessions of a cluster the participants will be requested to do homework, and if possible, to try-out ideas with students in their classrooms. The course will be implemented in Moodle in combination with Webex for online communication. Video streams of sessions will also be saved and accessible in the Moodle environment.

### Information and registration

Please contact your local ICSE Academy representative for further information on the course and for registration purposes. No registration fee is required as the course is co-funded by the European Union under grant no. 101052670. All participants will be asked to take part in a questionnaire.

More information can be found at: <https://icse.eu/icse-academy/>

### Recognition

Recognition is organized by local organization and can credits vary between 0,5-1 ECTS (micro-credentials) for a cluster, and between 2-4 ECTS for the whole workshop series. The credits will be provided by the participating universities in each of the countries.

## Tentative program

Time is CET.

Date	Topic
<b>Cluster 1: Learning by inquiry, Socio-scientific issues (SSI) and Interdisciplinarity</b>	
<b>October 3, 2023</b> 16:00 – 18:00	Local introduction to the workshop series
<b>October 10</b> 16:00 – 18:00	1. Inquiry-based STEM learning
<b>October 17</b> 16:00 – 18:00	2. Integrated STEM
<b>October 24</b> 16:00 – 18:00	3. Environmental challenges & and SSI in STEM
<b>Cluster 2: Diversity and inclusion in STEM</b>	
<b>October 31</b> 16:00 – 18:00	1. Introduction to diversity and inclusion in STEM education
<b>November 7</b> 16:00 – 18:00	2. Analysing and design STEM tasks for diversity and inclusion
<b>November 14</b> 16:00 – 18:00	3. Analysing inclusive classroom practices (based upon try-outs)
<b>Cluster 3: STEM in a digital era</b>	
<b>November 21</b> 16:00 – 18:00	1. Digital Competencies, Skills and Technology and STEM Field
<b>November 28</b> 16:00 – 18:00	2. Computational Thinking
<b>December 5</b> 16:00 – 18:00	3. Escape Games in STEM Education and VR
<b>Cluster 4: Assessment/STEM in Europe</b>	
<b>December 12</b> 16:00 – 18:00	1. Assessment practices
<b>December 19</b> 16:00 – 18:00	2. Curricula
<b>January 9, 2024</b> 16:00 – 18:00	3. Policy & ensuring quality