

*Learn*  
**STEM**

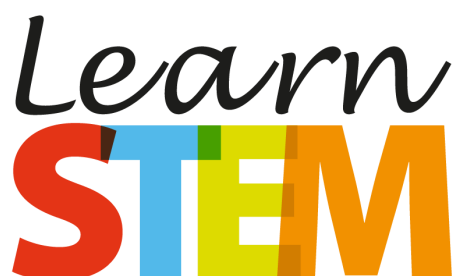
**The Design of  
the Online Course  
Innovative Pedagogy  
for STEM Education**



# Learn STEM

Innovative STEM learning in schools

## The Design of the Online Course Innovative Pedagogy for STEM Education



<http://www.learn-STEM.org>

**Coordinator:**

Open University of the Netherlands (OUNL)

**Project Partners:**

Agora, Roermond (Agora), Kaunas Science and Technology Park (KSTP),  
Kaunas Simonas Daukantas Progymnasium (KSDP), Association Effebi (Effebi),  
Technical University of Applied Sciences Wildau (TUASW), Madan Park (Madan),  
Group of Schools Emidio Navarro (GSEN), Eekhout Academy (Eekhout)

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# Learn STEM

## The Design of the Online Course Innovative Pedagogy for STEM Education

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# Learn STEM

# Learn STEM MOOC Welcome



<http://www.Learn-STEM.org>

Based on:

<Stracke, C. M. (2018). *MOOC Design Template*. [Online available at [www.mooc-quality.eu](http://www.mooc-quality.eu)]>

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<p><b>Welcome</b> (from 10th February 2020 to 11th March 2020)</p>	<p><b>Welcome to the MOOC Learn STEM: "Innovative Pedagogy for STEM Education"</b></p>	
<p><b>Responsible: OUNL</b></p>		
<p>Learning objectives:</p> <ul style="list-style-type: none"> <li>• To reflect the structure of the Online Course and your own intentions</li> <li>• To get to know the other online learners</li> <li>• To explore the online learning environment</li> </ul>	<p>Learning activities:</p> <ul style="list-style-type: none"> <li>• To read the introductory text</li> <li>• To discover the content and videos</li> <li>• To fulfil the tasks and assignments</li> <li>• To check the references if interested in further reading</li> </ul>	
<p>Topics of this week, the topic experts and their availability:</p> <ul style="list-style-type: none"> <li>• Introduction to the Online Course and other learners</li> <li>• Your own expectations and intentions for the Online Course</li> <li>• Functionalities and features of the online learning environment</li> </ul>		
<p>Timeplan for this week:</p> <ul style="list-style-type: none"> <li>• Welcome video - no live event</li> </ul>		
<p>Tasks and assignments for this week:</p> <ul style="list-style-type: none"> <li>• Introducing yourself in the discussion forum</li> <li>• Completing our anonymous survey</li> <li>• Getting familiar with the online course platform</li> </ul>		

## Subsection 1:

### Welcome

## Unit 1:

### Welcome

Welcome to our Online Course and Community!

Watch our welcome video on the next page: If it is not starting (due to browser issues or blockers), then you can watch it on YouTube here: [http://bit.ly/LearnSTEM2020\\_Welcome](http://bit.ly/LearnSTEM2020_Welcome)

The Introductory weeks start on 12th of March 2020.

And the Live Online Course starts on 26th of March 2020.

Thank you for joining: We are looking forward to our collaboration!

Subsection 2:

**Welcome video**

Unit 1:

**Welcome video**

Welcome video: [www.youtube.com/watch?v=KRd5cEfbSTU](http://www.youtube.com/watch?v=KRd5cEfbSTU)

Video integrated

### Subsection 3:

#### **Course weeks**

### Unit 1:

#### **Course weeks**

Our online course "Learn STEM: Pedagogical Model for innovative STEM education" consists of four weeks:

Week 1: Innovative STEM Learning

Week 2: Learner-centred STEM Education

Week 3: Teacher-centred STEM Education

Week 4: Innovative STEM Assessment

And there are two introductory weeks (opening on 12th of March 2020) before the four weeks of the online course start.



## Subsection 4:

### Course timing

#### Unit 1:

### Overview of timing

Here is the overview of the timing of the complete Online Course:

The **Introductory weeks start on 12th of March 2020.**

**Week 1** of the Online Course **starts on 26th of March 2020:**

The Live Online Course will be officially launched at the **Learn STEM Conference** (see: [www.Learn-STEM.org](http://www.Learn-STEM.org))

The live event of week 1 takes place on Tuesday, 31st of March 2020\*.

**Week 2** of the Online Course **starts on 2nd of April 2020.**

The live event of week 2 takes place on Tuesday, 7th of April 2020\*.

**Week 3** of the Online Course **starts on 16th of April 2020** (due to holiday season).

The live event of week 3 takes place on Tuesday, 21st of April 2020\*.

**Week 4** of the Online Course **starts on 23rd of April 2020.**

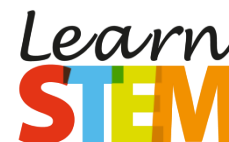
The live event of week 4 takes place on Tuesday, 28th of April 2020\*.

**The Outlook** and launch of the Online Community **starts on 30th of April 2020.**

\*) All live events start at **16:00 UTC (UK) = 18:00 CEST (Brussels)**. Due to many changes in winter and summer times during our online course, the starting times can be different for the weeks (depending on your time zone), please always check the precise starting times in the separate weeks!

After the live Online Course, **the Online Community will continue** and be available for you to follow up discussions, share experiences and explore latest news.

## About Learn STEM, the European Alliance for Innovative STEM learning in schools:



We need innovative and better school education in Science, Technology, Engineering and Mathematics (STEM) as key sectors for our future life, work and society. The European Alliance **Learn STEM** focuses their interrelation and integration in cross-disciplinary and reflective STEM education and pedagogical methodologies. Main goal of **Learn STEM** is to improve the quality and efficiency of STEM learning in secondary schools. Consequently, **Learn STEM** is increasing the pupils' interest in STEM and building STEM competences. Therefore, **Learn STEM** designs and provides pedagogical methods and tools for secondary schools to explore and solve real life questions. Thus, **Learn STEM** supports and contributes to the key objective of the European Education and Training 2020 Strategy (ET 2020) that fewer than 15% of 15-year-olds should be under-skilled in reading, mathematics and science.

Moreover, the **Learn STEM** project also addresses the need to enhance knowledge of and about science as a precondition to prepare Europe's population to be actively engaged, responsible citizens as well as conversant with the complex challenges facing society. In the PISA study 2015, most students expressed a broad interest in science topics and recognised the important role that science plays in their world; but only a minority reported their participation in science activities. In addition, teachers still declare they need more professional development linked to tailoring, diversifying, and innovating teaching practices. Thus, **Learn STEM** is strengthening secondary schools' capacity to develop skills in subjects such as science, technology, engineering and mathematics through innovative and interactive pedagogical methods and approaches. Therefore, **Learn STEM** designs and provides practical instruments and online tools for secondary schools and their teachers and pupils to explore and solve real life questions.

Under the leadership of the coordinator Dr. Christian M. Stracke from the Open University of the Netherlands, **Learn STEM** brings together nine Partners from six European countries. They are collaborating for innovative STEM education and have developed the [Learn STEM Pedagogical Model](#), the [Inquiry learning package](#), a [teacher training programme](#) and an [online course](#). These instruments are tested, evaluated and continuously improved in close cooperation with hundreds of STEM experts and school teachers. All **Learn STEM** results and achievements are openly and freely available on the **Learn STEM** website online:

<http://www.Learn-STEM.org>

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**Erasmus+**

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