



Empowering Girls in Science and STEM: A Practical Guide for Teachers

By Frederica Di Bartolomeo

Course details

- 🕒 One week course
- € Starting from 480€ (Cultural activities included)*
- 👥 Min. 4 - max. 14 participants
- 📄 Certificate of attendance included (80% of attendance required)
- 📍 Available in Amsterdam, Barcelona, Berlin, and Valencia

* A 60 € late registration fee will be applied if you register less than 8 weeks before the course start date.

Course description

When Laura Bassi was accepted as a member of the Academy of Sciences of Bologna in 1732, it was indeed a big deal. At that time, scientific studies and professions were an exclusively male prerogative everywhere in the world. However, even though she was the first person ever to open a school of experimental physics in Italy, it took her 34 years more to be assigned a chair as a professor of physics at the Institute of Sciences.

Today, almost 3 centuries after Laura's story, women aren't forbidden to undertake a career in science anymore – at least in Western countries. Nevertheless, only 34% of graduates in STEM subjects (Science, Technology, Engineering, and Maths) in Europe are female, and the underrepresentation of women in STEM represents a persistent issue.

The EU institutions decisively prompt educational systems to take action and promote the role of women in science.

The course will help schoolteachers and educators to promote gender equality in their environment, and support girls' learning and career aspirations in scientific fields.

Participants will discuss the reasons behind the gender gap in STEM. Sure, girls and young women aren't prevented from studying science, but are they properly encouraged to take such a path? This does not happen because science is perceived as a difficult subject, and women are often assumed as not naturally apt for it. Moreover, the lack of female role models in science confirms such a bias.

Course code TM.1.EMPG - <https://www.teacheracademy.eu/course/gender-equality-in-stem/> - Last update 06/11/2023

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Participants will thus discuss how to prompt reflection on the absence of women in the scientific narrative, how to highlight inspiring role models, and how to address gender-based expectations and stereotypes that limit girls and young women's aspirations and self-belief.

The course will also offer effective techniques to learn how to create a more inclusive and equitable classroom environment, where girls can express their full potential. Thus, participants will learn about the growth mindset, and how it can promote a more positive understanding of mistakes and personal growth in all students.

Finally, participants will explore a wide range of possibilities to help all learners acquire an interest in STEM subjects by creating hands-on and interactive learning experiences.

By the end of the course, participants will master practical strategies for increasing student motivation in STEM subjects, and in particular encouraging girls to study science. They will feel more at ease in introducing discussion about gender gaps and inequality in their classroom, and ready to help all their learners realize their full potential in scientific fields.

Learning outcomes

The course will help the participants to:

- Foster a growth mindset among students;
- Create a supportive and inclusive environment for girls, enhancing their participation and interest in STEM studies;
- Guide students in challenging gender-based expectations and stereotypes that can discourage girls from pursuing careers in science;
- Offer proper mentorship to girls, through activities that connect them with female scientists and encourage them to pursue careers in science;
- Develop and adopt practical strategies and activities to encourage girls to engage in STEM.

Tentative schedule

Day 1 – STEM studies and “the gender issue”

- Welcome and icebreaking activities;
- Introduction to the course and the week's activities;
- Presentations of the participants' schools;
- STEM studies and “the gender issue”: an introduction.





Day 2 – Identifying the roots of bias and stereotypes about women in science

- History of Science: How many women can we really recall?
- Playing and learning only with “girls’ stuff” during infancy and childhood: what are the consequences?
- The “female school subjects” myth;
- The gender-based bias in scientific environments and its impact on society.

Day 3 – Knocking down traditional gender expectations in your class

- Guiding students in recognizing gender-based expectations and stereotypes;
- Getting inspiration from contemporary children and teen books;
- Helping to develop a growth mindset among your students;
- Teaching science: Dos and Don’ts.

Day 4 – Practical activities, tools, and resources to encourage girls to study STEM

- Exploring engaging tools and resources to enhance a scientific mindset
- Recognizing inspiring role models for girls in science
- Inspiring girls while discovering the impact of Science in our world
- Educational projects to help girls study STEM: some examples.

Day 5 – What’s your idea?

- More practical activities to promote STEM subjects in your class;
- Designing a project or workshop for your school;
- Presenting your project.

Day 6 – Course closure and cultural activities

- Course evaluation: round-up of acquired competencies, feedback, and discussion;
- Awarding of the course Certificate of Attendance;
- Excursion and other cultural activities.

*The schedule describes likely activities but may differ significantly based on the requests of the participants, and the trainer delivering the specific session. Course modifications are subject to the trainer’s discretion. If you would like to discuss a specific topic, please indicate it at least 4 weeks in advance.





Our courses usually include two cultural activities. Further information is available on the webpage of each course location.

About the provider

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