

MUNI

Erasmus+ BIP in Brno

Supporting curriculum through integrated STEAM education practices
(2024-1-CZ01-KA131-HED-000226917-3)

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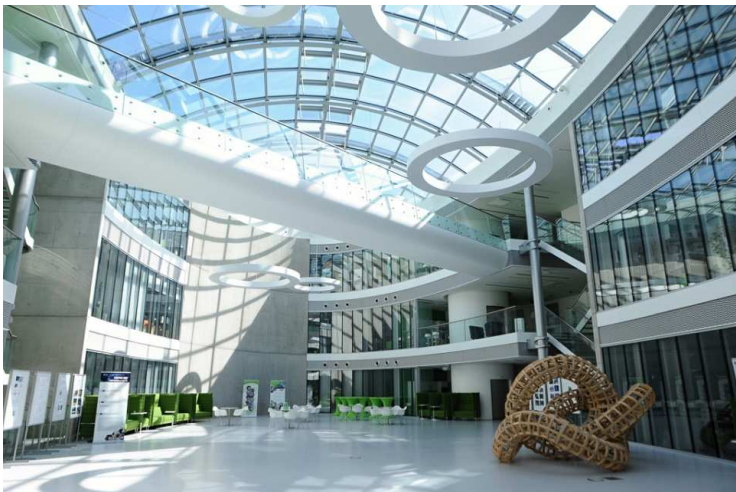
Brno, 6.9.2024

Welcome to the Masaryk University, Brno!



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Programme of this kick off meeting

- Basic information about travelling, accommodation and BIP programme
- Introduction of organisers and teachers
- What is STEAM education and how our countries deal with it
- Introduction of students
- Group work – experiences with STEAM, expectations on BIP

Basic information

- Supporting curriculum through integrated STEAM education practices
- Online part – September 6th (now)
- In-person part – September 9th till September 13th
Lectures, workshops, informal meetings

Poříčí 31, 2nd floor, classroom 32

**MASARYK
UNIVERSITY**

ipvc Instituto Politécnico
de Viana do Castelo



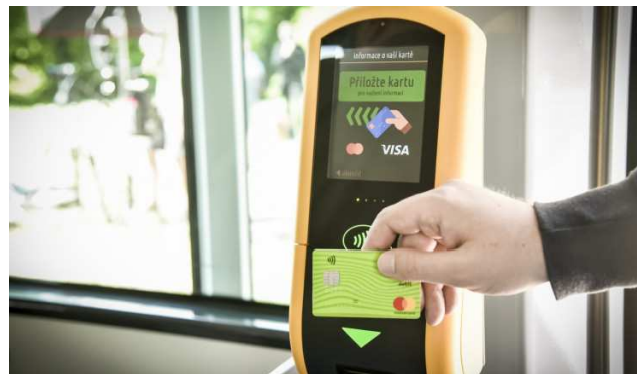
**Università
di Catania**



Basic information – travelling



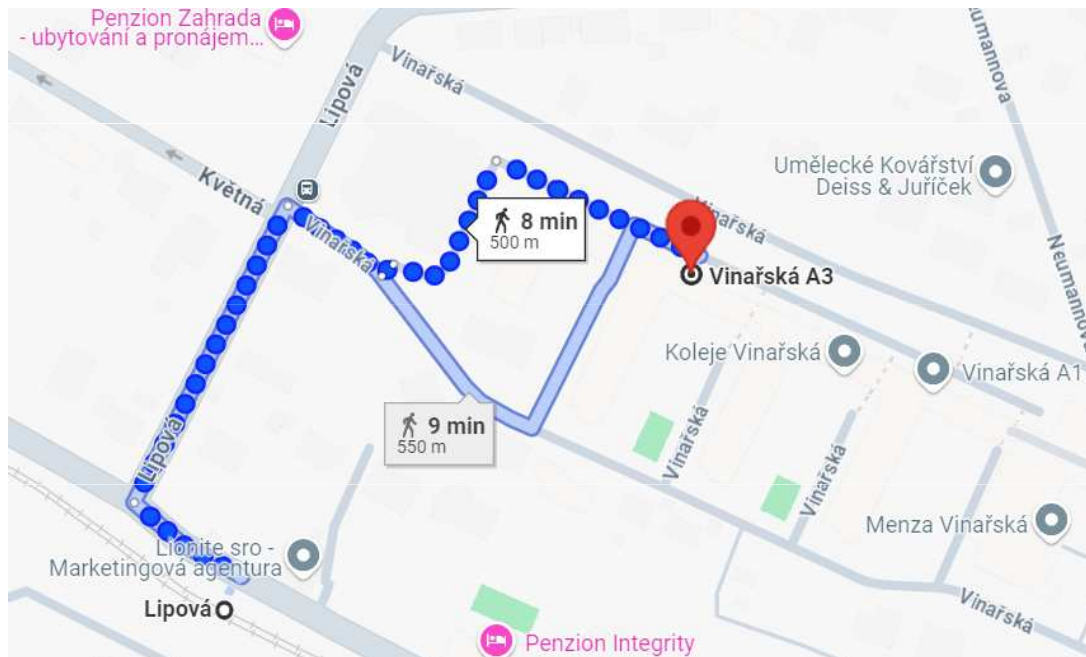
- You can use several applications to search for connections, like IDOS
- For the Faculty of Education (Poříčí 31), it takes 3 stops from the main train station (the stop Václavská); for the accommodation, it takes 4 more stops (the stop Lipová or Arena Brno, the stop will change the name in a few days).



Basic information – accommodation

- Room will cost 1100 CZK per night (around 44 euros) for 2 persons or 800 CZK per night (around 32 euros) for 1 person + city tax 40 CZK per night (around 1,6 euros)
- Payment is possible after arrival by card or by cash (in CZK)
- Upon arrival (from 14:00) it is necessary to show a valid document (ID or passport) and fill out the registration form, on the day of departure, the room must be vacated by 11:00
- Address: Vinařská 5, block A3, phone: 549492713

Basic information – accommodation



Basic information – food

- Lunches are provided at the canteen of the Faculty of Education, Poříčí 7
- Everyday snack during a coffee break
- Farewell dinner on Thursday at Pivovarská Starobrno, Mendlovo náměstí



Basic information – food

- Breakfasts are not included, you can use many cafes, bakeries and shops in Brno
- Kafinet (Poříčí 31)
- Klásek bakery (Hybešova 46)
- Maybe (Víteňská 18a)



Programme

Friday, September 6 – ONLINE

Link: <https://teams.microsoft.com/meet/345314713578?p=hyL7VYqEMSL4EfG7CW>

9:00-10:30	Kick-off meeting. General introduction to the program, contents, and assessment. Practical information.
10:30-11:00	Coffee break
11:00-13:00	Group presentation. Initial perspectives about STEAM Education and discussion of some topics.

Monday, September 9

8:30-9:00	Registration
9:00-9:30	Welcome speech
9:30-10:30	Lecture: Content analysis of databases of STEM learning tasks with a focus on geography, mathematics and modern technology Tereza Šimčíková (Masaryk University)
10:30-11:00	Coffee break
11:00-13:00	Workshop: Data in run Lukáš Rokos (University of South Bohemia in České Budějovice)
13:00-14:00	Lunch break
14:00-16:00	Workshop: Robotics at the Faculty of Education Karel Picka (Masaryk University)
17:30	Walk through Brno

Programme

Tuesday, September 10	
9:00-12:00	Workshop: Outdoor Mathematics with MathCityMap Ana Barbosa (Polytechnic Institute of Viana do Castelo)
12:00-13:00	Lunch break
13:00-15:00	Workshop: STEAM approach in building automatons: wheels and axles Ana Peixoto (Polytechnic Institute of Viana do Castelo)
15:00-15:30	Coffee break
15:30-17:30	Workshop: STEAM approach in building automatons: wheels and axles Ana Peixoto (Polytechnic Institute of Viana do Castelo)
Wednesday, September 11	
9:00-10:30	Lecture: Gender awareness in STEAM education: why and how? [online] Ana Belén Rodríguez Raposo (University of Santiago de Compostela)
10:30-11:00	Coffee break
11:00-13:00	Workshop: Robotics in STEAM Education: A Hands-On Journey with Graph Theory Challenges Teresa Fernández Blanco, Antía Fernández López and Cristina Lois Prados (University of Santiago de Compostela)
13:00-14:00	Lunch break
14:00-16:00	Workshop: Robotics in STEAM Education: A Hands-On Journey with Graph Theory Challenges Teresa Fernández Blanco, Antía Fernández López and Cristina Lois Prados (University of Santiago de Compostela)

Programme

Thursday, September 12

9:00-10:30	Lecture: AI and its use from the legal point of view Michal Antoš (Law office AKSKP)
10:30-11:00	Coffee break
11:00-13:00	Workshop (half group): Virtual Reality and its use in natural sciences, medicine and education David Antoš (Masaryk University)
13:00-14:00	Lunch break
14:00-16:00	Workshop (half group): Woodcraft and modern tools (engraving, 3D print) Jitka Šťastná (Masaryk University)
18:00	Farewell dinner

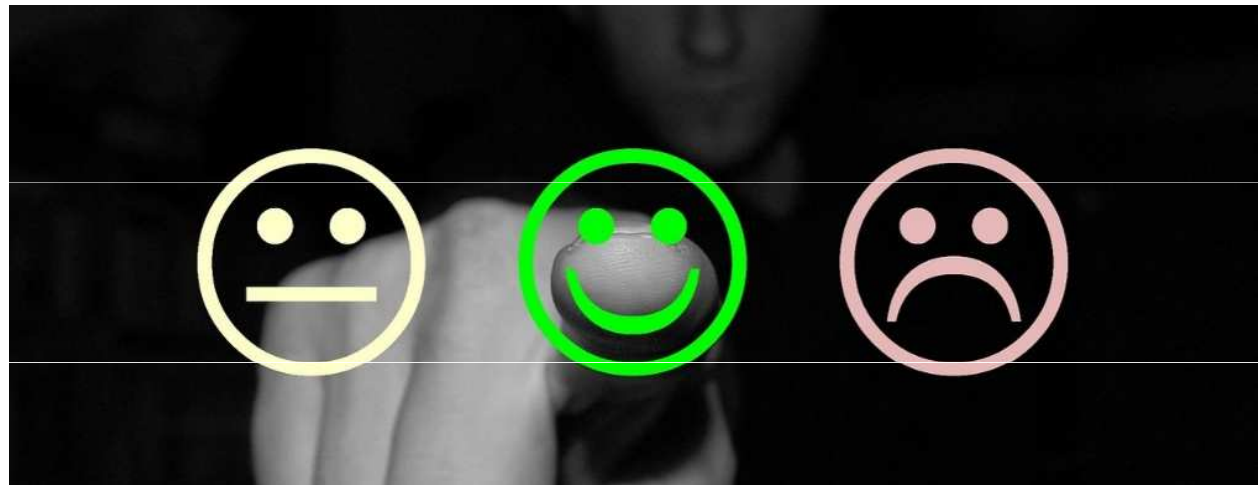
Friday, September 13

9:00-10:30	Group work.
10:30-11:00	Coffee break
11:00-13:00	Group presentation. Joint discussion and closing session.
13:00-14:00	Lunch

Assessment

- Participation in lectures and workshops
- Quality of the projects developed
- Group presentation
- Self-evaluation

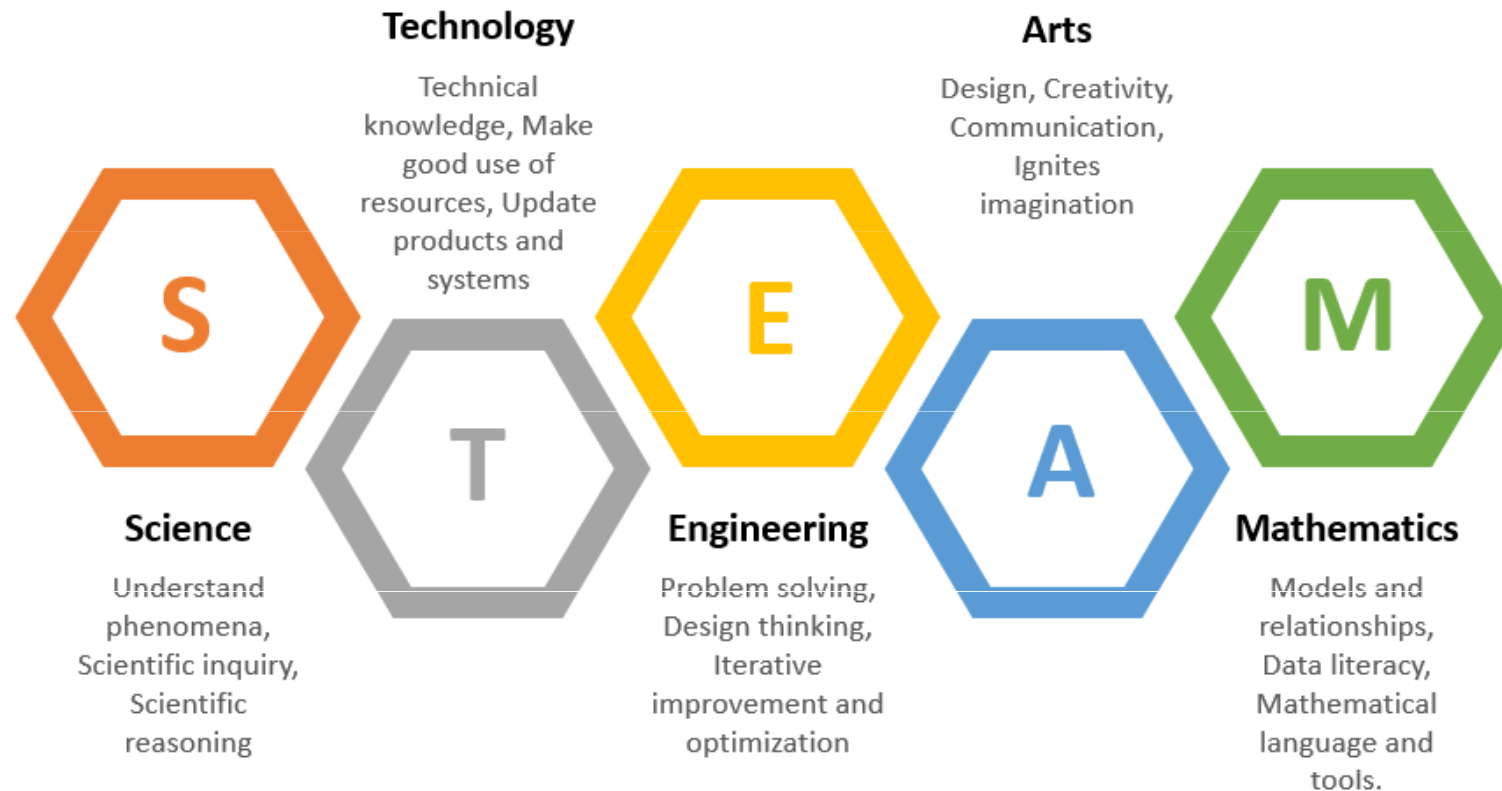
- 10 points scale



Groups

Rita Natércia Fernandes da Silva	Sofía Vázquez Rodríguez	Alberto Ferro Vázquez	Chiara Anastasi
Catarina Rafaela Barbosa da Costa	Inés Domínguez Abruñedo	Anna Ruggeri	Martin Košťál
Ana Gabriela Soares Cardoso	Marta Maria Fernandes Machado	Aída de Pedro López	Fabio Genovesi
Iolanda Magalhães da Silva	Jaime Ferro Vilas	Sara Riolo	Lydie Kotrlová
Marie Gabriela Silva Rio	Lucía Trashorras Cendán	Leonardo Fragapane	Salome Černá

STEAM Education



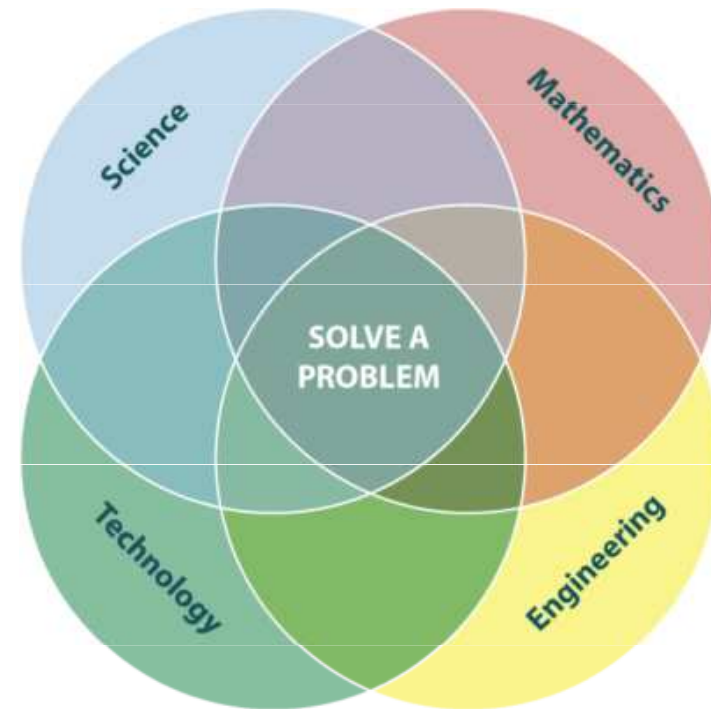
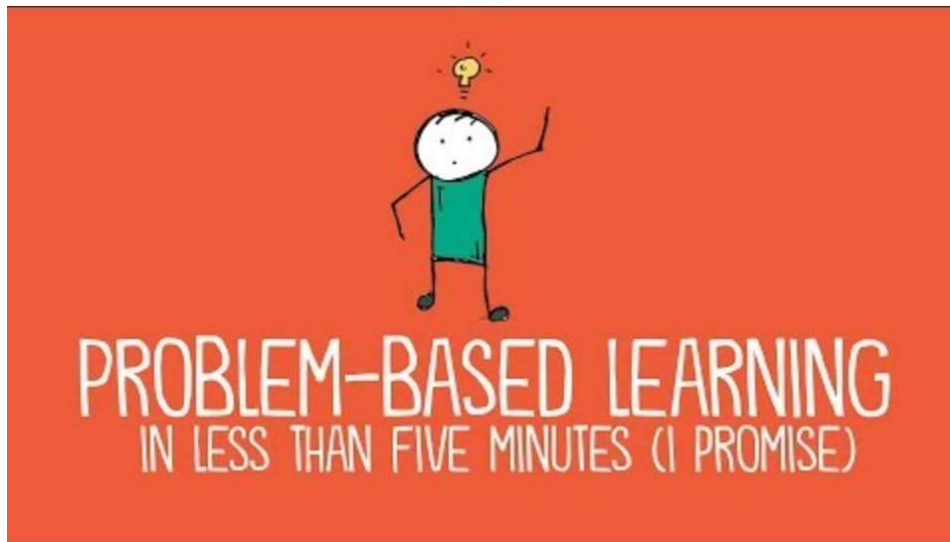
STEAM Education

- Created in the USA in 1990s
- Number of students in these fields is significantly decreasing and their lack of interest in studying STEM subjects is increasing
- Important fields for development and growth of economies
- In the first wave of STEM was implemented in higher education, later the level of secondary schools, at the end primary schools, where it lays the foundations of knowledge, skills and attitudes that are crucial for further education
- STREAM (R – writing, mastering the language of science)
- STEAMIE (IE – include everyone, everyone can be educated, inclusion in education)

STEAM Education – Problem-solving

- The need for problem-solving approach can be dated to the half of the 20th century (International Mathematical Olympiad)

<https://www.youtube.com/watch?v=RGoJIQYGpYk>



STEAM Education in Czechia

- Most visible in alternative schools, where, thanks to block teaching, there is room for the introduction of stem education
- Projects on STEM – EduStem (Polybus), Fablab ...
- Bricks 4 Kidz



- University level
South Bohemian University in České Budějovice,
Masaryk university

