





 $TeaEdu4CT\ \text{-}\ Future\ Teachers\ Education:\ Computational\ Thinking\ and\ STEAM$ 

# Student training school for Computational Thinking and STEM AGENDA (C1)

| Date:         | September 13-17, 2021  |
|---------------|--|
| Venue:        | Vilnius University Central Building, rooms 238 & 239                 |
| Address:      | Universiteto str.3, Vilnius  |
| Participants: | Students future teachers from Vilnius, Paderborn, Tallinn and Vienna |

## Monday, September 13 (room 239)

| (for partners from abroad) |  |  |  |
|----------------------------|--|--|--|
| 10:00-10:30                | Welcome and enjoying being together!   |  |  |
| 10:30-11:30                | Presentation of teacher education at Vilnius university  |  |  |
| 11:30-12:00                | Questions and discussion & Photo   |  |  |
| 12:00-13:00                | Lunch Break (restaurant "Fiorentino", Universiteto str. 4)   |  |  |
| 13:00-14:00                | Welcome to the training school. Introduction: presentations from students from Austria, Estonia, and Germany. Presentation of Lithuanian students by study groups. |  |  |
| 14:00-14:15                | Introduction to the TeaEdu4CT project. Questions<br>prof. dr. Valentina Dagienė, Vilnius University, Lithuania   |  |  |
| 14:15–15:30                | Module O9: Using Constructivism, and Project and Challenge Driven Pedagogy for learning Computational Thinking   |  |  |
|                            | prof. dr. Arnold Pears, KTH Royal Institute of Technology, Sweden<br>lic. Helena Isacsson Persson, KTH Royal Institute of Technology, Sweden                       |  |  |
| 15:30-16:00                | Questions and discussions  |  |  |

### Tuesday, September 14 (rooms 239 & 238)

#### Students work in two parallel groups

| 09:00-10:00 | Introduction to the Module O2 (for all students): General introduction of  |  |  |
|-------------|--|--|--|
| room 239    | <b>Computational Thinking: A basic module suitable for all teachers</b><br><i>prof. dr. Erik Barendsen, Radboud University, The Netherlands</i>  |  |  |
| 10:00-11:30 | Work with the Module O2 material (two groups in parallel)  |  |  |
| 239 & 238   | prof. dr. Erik Barendsen, Radboud University, The Netherlands<br>prof. dr. Gerald Futschek, Vienna University of Technology, Austria<br>prof. dr. Yasemin Gülbahar, Ankara University, Turkey<br>Michael Lenke, University of Paderborn, Germany       |  |  |
| 11:45-13:15 | Work with the Module O2 material (two groups in parallel)  |  |  |
| 239 & 238   | prof. Erik Barendsen, Radboud University, The Netherlands<br>prof. dr. Gerald Futschek, Vienna University of Technology, Austria<br>prof. dr. Yasemin Gülbahar, Ankara University, Turkey<br>prof. dr. Michael Lenke, University of Paderborn, Germany |  |  |
| 13:15-14:00 | Reflection and discussions together  |  |  |
| Room 239    |  |  |  |
|             |  |  |  |

**14:00–15:00** Lunch Break (restaurant "Fiorentino", Universiteto str. 4)







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#### Wednesday, September 15 (rooms 238 & 239)

Students work in two parallel groups

**09:00–11:00** (two groups in parallel) Module O3 / O6

239 & 238 Module O3: CT for pre-school (kindergarten) prospective teachers: specific features, approaches and practical solutions

prof. dr. Ayşegül Bayraktar, Ankara University, Turkey prof. dr. Yasemin Gülbahar, Ankara University, Turkey

# Module O6: **CT for informatics (computing) prospective teachers: specific features, approaches and practical solutions**

prof. dr. Gerald Futschek, Vienna University of Technology, Austria Martina Landman, University of Vienna, Austria

- **11:15–13.15** (two groups in parallel) Module O6 / O3 (two groups in parallel)
- 239 & 238 Module O6: CT for informatics (computing) prospective teachers: specific features, approaches and practical solutions

prof. dr. Gerald Futschek, Vienna University of Technology, Austria Martina Landman, University of Vienna, Austria

Module O3: **CT for pre-school (kindergarten) prospective teachers: specific features, approaches and practical solutions** 

prof. dr. Ayşegül Bayraktar, Ankara University, Turkey prof. dr. Yasemin Gülbahar, Ankara University, Turkey

- 13:15–14:00 Reflection and discussions together
- Room 239 prof. dr. Ayşegül Bayraktar, Ankara University, Turkey prof. dr. Yasemin Gülbahar, Ankara University, Turkey prof. dr. Gerald Futschek, Vienna University of Technology, Austria Martina Landman, University of Vienna, Austria
- **14:00–15:00** Lunch Break (restaurant "Fiorentino", Universiteto str. 4)







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#### Thursday, September 16 (rooms 238 & 239)

**Students work in two parallel groups** 

- **09:00–11:00** (two groups in parallel) Module O4 / O5
- 239 & 238 Module O4: CT for primary education prospective teachers: specific features, approaches and practical solutions

prof. dr. Claudia Tenberge, University of Paderborn, Germany Michael Lenke, University of Paderborn, Germany

# Module O5: **CT for STEM prospective teachers: specific features, approaches and practical solutions**

prof. dr. Erik Barendsen, Radboud University, The Netherlands prof. dr. Gerald Futschek, Vienna University of Technology, Austria

- **11:15–13:15** (two groups in parallel) Module O5 / O4 (two groups in parallel)
- 239 & 238 Module O5: CT for STEM prospective teachers: specific features, approaches and practical solutions

prof. dr. Erik Barendsen, Radboud University, The Netherlands prof. dr. Gerald Futschek, Vienna University of Technology, Austria

# Module O4: **CT for primary education prospective teachers: specific features, approaches and practical solutions**

prof. dr. Claudia Tenberge, University of Paderborn, Germany Michael Lenke, University of Paderborn, Germany

**13:15–14:00** Reflection and discussions

#### Room 239

**14:00–15:00** Lunch Break (restaurant "Fiorentino", Universiteto str. 4)







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### Friday, September 17 (rooms 238 & 239)

#### Students work in two parallel groups

| <b>09:00–11:30</b><br>239 & 238 | (two groups in parallel) Module O7: <b>CT for languages, arts and humanities</b><br><b>prospective teachers: specific features, approaches and practical solutions</b><br><i>prof. dr. Ayşegül Bayraktar, Ankara University, Turkey</i><br><i>prof. dr. Serkan Keleşoğlu, Ankara University, Turkey</i> |  |  |
|---------------------------------|---|--|--|
| 11:30-12:00                     | Reflection and discussions  |  |  |
| 239 & 238                       |   |  |  |
| 12:00-13:00                     | Overview of the trainings, reflection and discussion on all modules.  |  |  |
| Room 239                        | prof. dr., Erik Barendsen, Radboud University, The Netherlands<br>prof. dr. Gerald Futschek, Vienna University of Technology, Austria<br>all partners   |  |  |
| 13:00-13:30                     | Thanks to students, questionnaires, certificates  |  |  |
| Room 239                        | prof. dr. Valentina Dagienė, Vilnius University, Lithuania  |  |  |
|                                 | all partners  |  |  |
| 14:00-15:00                     | Lunch Break (restaurant "Fiorentino", Universiteto str. 4)  |  |  |

### *TeaEdu4CT* Intellectual Outputs Piloting and Translation

https://drive.google.com/drive/folders/1yRX6jrKQaRM8Xr9tATuPVuIC1jylUH86?usp=sharing

| ID   | Output Title   | Leading & Piloting           | Translation/Piloting  |
|------|--|------------------------------|---|
| IO1  | Framework for the support of the modules: CT&STEM for future teacher education   | <b>P1</b> – VU – Lithuania   | P4 – ANKU - Turkey<br>P5 – TLU - Estonia                              |
| IO2  | General Introduction of<br>Computational Thinking: a basic<br>module suitable for all teachers                             | <b>P8</b> – RU– Netherlands  | P1 – VU - Lithuania<br>P3 – KTH - Sweden                              |
| 103  | CT for pre-school (kindergarten)<br>prospective teachers: specific<br>features, approaches and practical<br>solutions      | <b>P4</b> – ANKU – Turkey    | P5 – TLU - Estonia<br>P9 – UPB - Germany                              |
| IO4  | CT for primary education<br>prospective teachers: specific<br>features, approaches and practical<br>solutions              | <b>P9</b> – UPB - Germany    | P1 – VU - Lithuania<br>P6 – CESIE – Italy<br>P10 – CARDET -<br>Cyprus |
| 105  | CT for STEM prospective teachers:<br>specific features, approaches and<br>practical solutions                              | <b>P8</b> – RU – Netherlands | P1 – VU - Lithuania<br>P3 – KTH - Sweden                              |
| 106  | CT for informatics (computing)<br>prospective teachers: specific<br>features, approaches and practical<br>solutions        | <b>P7 –</b> TUW – Austria    | P1 – VU - Lithuania<br>P9 – UPB - Germany                             |
| 107  | CT for languages, arts and<br>humanities prospective teachers:<br>specific features, approaches and<br>practical solutions | <b>P4</b> – ANKU – Turkey    | P6 – CESIE - Italy<br>P2 – UTU - Finland                              |
| 108  | Educational environments for CT:<br>design and aspects of integration  | P2 – UTU – Finland           | P1 – VU - Lithuania<br>P5 – TLU - Estonia<br>P10 – CARDET -<br>Cyprus |
| 109  | Using Constructivism, and Project<br>and Challenge Driven Pedagogy for<br>learning Computational Thinking                  | P3 – KTH – Sweden            | P6 – CESIE - Italy<br>P8 – RU - Netherlands                           |
| IO10 | Technological, pedagogical and<br>instructional design aspects of<br>teaching CT for STEAM                                 | P5 – TLU – Estonia           | P6 – CESIE – Italy<br>P7 – TUW – Austria                              |

Link for training material:

https://drive.google.com/drive/folders/1yRX6jrKQaRM8Xr9tATuPVuIC1jylUH86?usp=sharing

Turku University (UTU, Finland), KTH (Sweden), Ankara University (ANKU, Turkey), Tallinn University (TLU, Estonia), CESIE (Italy), Vienna University of Technology (TUW, Austria), Radboud University (RU, The Netherlands), Paderborn University (UPB, Germany), CARDET (Cyprus)