



## Teaching and Learning Centre

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## Department of Humanities and Social Sciences

**BITS Pilani, K. K. Birla Goa Campus, Goa**

**in collaboration with**

**School of Humanities and Social Sciences,**

**Indian Institute of Technology, Goa,**

&

**The Center for Learning Sciences,**

**The Swiss Federal Institute of Technology**

**Lausanne, Switzerland**

**Organize a series of workshops on**

**Teaching Transversal Skills using Tangibles for Technical Students**

**on 10 & 11 January, 2025**

### Brief Blurb of the Workshop Series

The 3T PLAY project at the Swiss Federal Institute of Technology Lausanne (EPFL) invites you to a half-day professional development opportunity focusing on teaching transversal skills. This workshop is based on the evidence-informed, scholarly output from a multi-year translational research project. You will discover open-source activities that you can adapt for your own context, which are complemented by a framework for designing experiential learning activities focusing on transversal skills. These workshops have been conducted in multiple countries and the participants have found them to be valuable in influencing their teaching practice. Target Audience: Professors, teachers, and pedagogical advisors who work with science and engineering students.

### Resource Person



Dr. Joelyn de Lima is a scientist & pedagogical advisor at the Ecole Polytechnique Fédérale de Lausanne (EPFL). Trained in the biological sciences, she transitioned to being a discipline-based education researcher. Currently, her research and practice are focused on enhancing the higher educational experience for students. Her background has given her a unique blend of perspectives – in terms of culture (She has lived, worked, and taught on 3 continents), theoretical grounding (natural sciences and education), and practice (research & teaching, formal & informal education).

## Schedule of the Workshop - Day 1

Date: 10 January 2025; Time: 4.00-06.00 p.m.

Venue: Indian Institute of Technology, Goa

### 1. How to support students to develop skills that promote sustainability

Sustainability should be integrated into everything we do, including engineering and student projects. This experiential activity uses the selection of materials for a wind turbine to engage participants in a contextualised negotiation of multiple facets of sustainability. Participants first assume one of 4 engineering roles to identify specific sustainability priorities based on their responsibilities and expertise. Next, they represent the perspective of their assigned role to optimise sustainability in the design. It targets the development of the following skills:

- \* Perspective taking, applied to diverse stakeholders.
- \* Systems thinking, applied to facets of sustainability.
- \* Negotiation

Duration: 90 mins

#### Coordinators from IIT Goa

**Prof. Sunil Paul**, Associate Professor and Program Chair, School of Humanities and Social Sciences, IIT Goa

**Ms. Neeraja Raghavan**, English Language Instructor, IIT Goa

## Schedule of the Workshop - Day 2

Date: 11 January 2025; Time: 10.00 a.m. - 01.00 p.m.

Venue: Birla Institute of Technology and Science Pilani,  
K. K. Birla Goa Campus, Goa

### 2. How to support students to develop planning and risk management skills

Planning and risk management are important skills not only during higher education (e.g. projects for courses, thesis etc), but also for many professional roles. Students often underestimate the importance of planning and risk assessment, and consequently face unnecessary difficulties in their projects. This workshop is designed to target the development of the following skills:

- \* Identify typical difficulties students have during the project.
- \* Develop professional skills such as project management and decision-making skills.
- \* Work together collaboratively on projects.

### 3.How to design your own activity to teach transversal skills

This activity will guide you to identify relevant transversal skills and to design corresponding experiential learning activities. Explicit scaffolding using our trident framework will ensure that the activity you develop includes the three aspects essential for robust skill development: Knowing, Experiencing, and Learning from experience. This activity is designed for higher education teachers. It assists them to:

- \* Identify relevant transversal skills for their students.
- \* Design a prototype of an activity based on the trident framework to develop students' level for these skills

Duration: 90 mins

#### Coordinators from BITS Goa

**Prof. Reena Cheruvalath**, Professor, Department of Humanities and Social Sciences, BITS Pilani, K. K. Birla Goa Campus

**Prof. Rayson K. Alex**, Associate Professor, Department of Humanities and Social Sciences, BITS Pilani, K. K. Birla Goa Campus

**Prof. Hareesh A.G.**, Assistant Professor, Department of Humanities and Social Sciences, BITS Pilani, K. K. Birla Goa Campus

Registration for the workshop is free. Interested participants can scan the QR code to register. Snacks and lunch will be provided. Please note that travel and accommodation will not be provided.

You may register separately for the workshops at BITS Goa and IIT Goa, or attend both, as the topics covered in each are distinct and non-continuous.

