

# TEACHER-STUDENT TANDEM FOR SUSTAINABILITY EDUCATION

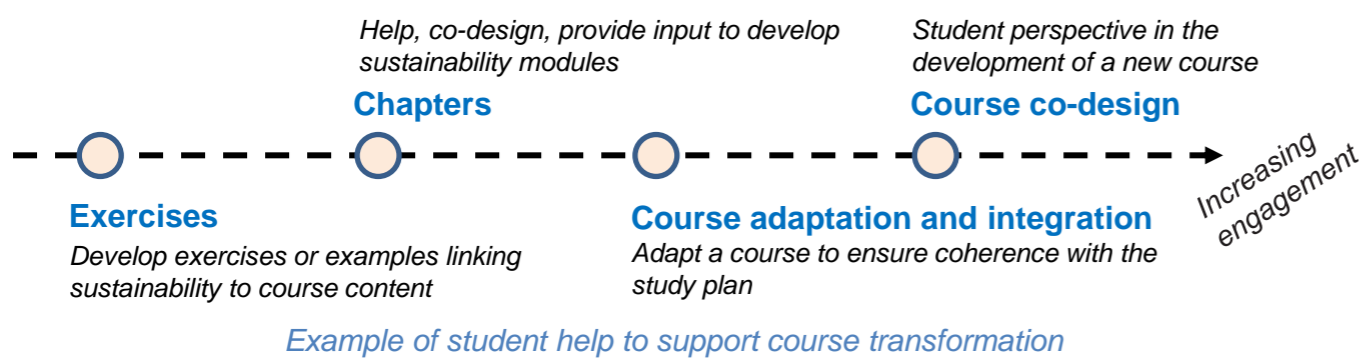
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EPFL Sustainability, Sustainability-Education team, Vice-Presidency for Responsible Transformation (VPT)

## 1. What is a teacher-student tandem?

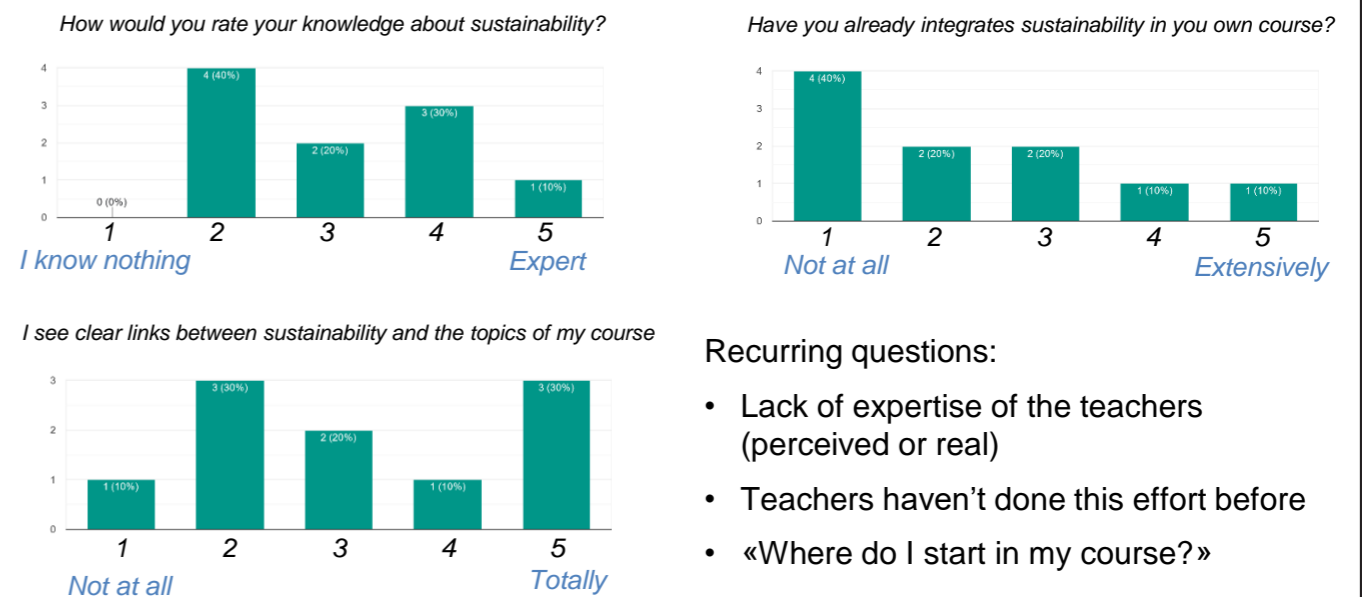
The creation or transformation of courses to include- take into account- or add a focus on **sustainability** is delicate and often complex. [Students should be part of this process too!](#)

In a **teacher-student tandem** a pair is formed, with the support of the EPFL sustainability office, between a teacher and a student to work on the transformation of a course.



## 2. Motivation

\*answers collected during a workshop with EPFL teachers



Recurring questions:

- Lack of expertise of the teachers (perceived or real)
- Teachers haven't done this effort before
- «Where do I start in my course?»

## 3. The tandem initiative at EPFL

**EPFL** Resources for students and teachers

### Sustainability and Education

How to include sustainability in EPFL courses?

You can help us if you are....

**A student**  
We are looking for student assistants to support this transition

**A teacher**  
We offer coaching, teacher training and finance student assistants to work with you

Do you want to know more?

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Unité Durabilité

The flyer of the teacher-student tandem initiative at EPFL

EPFL Sustainability office plays an enabling role:

- Find matches between the needs of the teachers and the expertise of the students
- Manage the **administrative parts**, including students remuneration (it is not volunteering, but actual work)
- Keep alive and constantly **update a pool of possible student assistants**, to be «activated» as soon as a need emerges
- Ensure that the **student community and associations are engaged** in this process

## 5. A testimony



«When I was a Bachelor's student, I found it frustrating that so few classes at EPFL covered sustainability topics, whereas it'll be a key element of our. So I wanted to do something that would help tomorrow's undergraduates get the education I would've liked to have.»

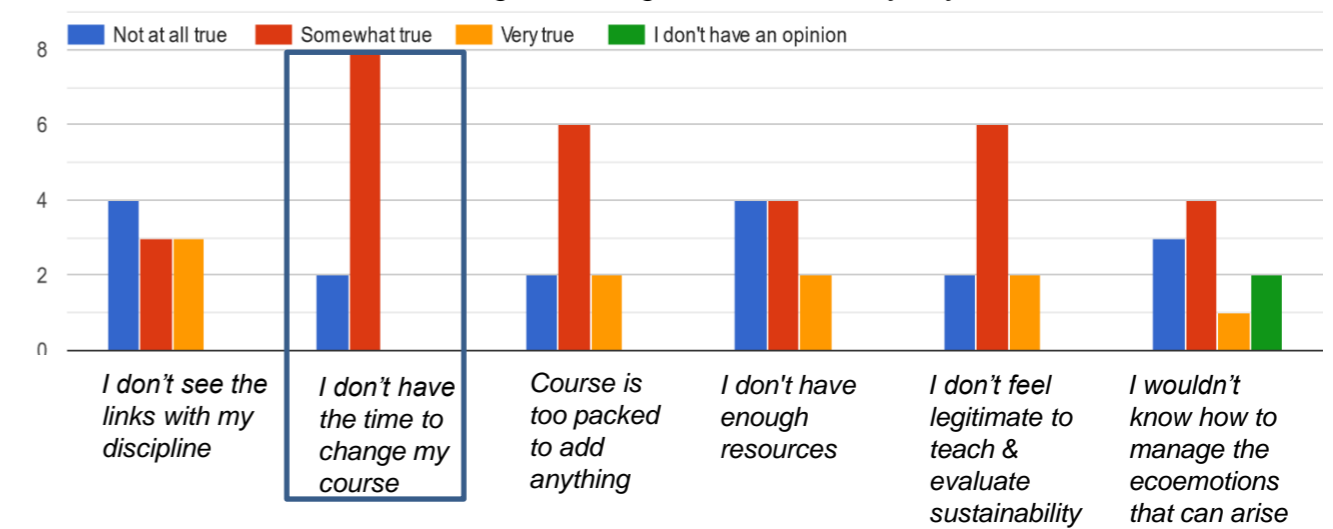
Iléane Lefevre, student, on her motivation

«Discussing with Iléane helped me to have a better landscape on the teaching of sustainability in this section. This was also useful to know more about students' expectations on this topic, which is really important to them. I hope to show them areas of hope, to show them that all is not lost and that they can have a positive impact»

Tiffany Abitbold, teacher, on the added value of a tandem

<https://actu.epfl.ch/news/epfl-will-train-students-on-sustainability/>

What are the main challenges to integrate sustainability in your own course?



Student perspective, input and workforce can help tackle the common blockages to course transformation

## 4. Examples

**Algebra:** creation of exercises that convey sustainability information

MATH-101(pi) Analyse I (classe inversée)			
Garin Adélie			
Cursus	Sem.	Type	Langue
Chimie et génie chimique	BA1	Obl.	français
Génie civil	BA1	Obl.	Coefficient 6
Génie mécanique	BA1	Obl.	Séances 6
Génie électrique et électronique	BA1	Obl.	Semestre Hiver
Informatique	BA1	Opt.	Examen Automne
Ingénierie des sciences du vivant	BA1	Obl.	Charge Ecrit 180h
Microtechnique	BA1	Obl.	Semaines 14
Science et génie des matériaux	BA1	Obl.	Heures 6 hebdo
Sciences et ingénierie de l'environnement	BA1	Obl.	Cours 4 hebdo
Systèmes de communication	BA1	Obl.	Exercices 2 hebdo
			Nombre de places

The tandem:

- A teacher already applying pedagogical innovation to mathematics
- A student investing effort to create exercises with sustainability content

**Material sciences:** include student perspective in the design of a new course

MSE-341 Sustainability and materials			
Abitbol Tiffany			
Cursus	Sem.	Type	Langue
Ing.-chim.	MA2, MA4	Opt.	English
Materials Science and Engineering	BA6	Obl.	Credits 3
Neuro-X	MA2, MA4	Opt.	Séances 6
			Semestre Summer
			Examen Spring
			Exam During the semester
			Workload 90h
			Weeks 14
			Hours 3 weekly
			Lectures 2 weekly
			Exercices 1 weekly
			Number of positions

The tandem:

- A new professor brings the scientific expertise for the course content
- A student of the same section brings the perspective for optimal integration within the study plan

**IT:** adaptation of an ethics course for students of the informatics faculty

HUM-392 The Ethics and Law of Artificial Intelligence			
Rochel Johan Robert			
Cursus	Sem.	Type	Langue
Humanities and Social Sciences	BA5	Obl.	English
			Credits 2
			Séances 2
			Semestre Winter
			Exam Fall
			Exam During the semester
			Workload 60h
			Weeks 14
			Hours 2 weekly
			Lecture 2 weekly
			Number of positions 80

The tandem:

- The professor is an expert of ethics in business and technology
- A student helps to adapt this course for an audience of informatics

**Other examples across-school**

- Thermodynamics course: link course content to sustainability and climate change topics
- Climate change and energy course: the student performs literature review and benchmarking for the design of a new course on this subject