

**Organising
institution**

Università degli Studi di Padova
Dipartimento di Tecnica e Gestione dei Sistemi Industriali - DTG
Prof.ssa Lisa Biasetto

**Visiting
Professor**

Yves Leterrier,
Ecole Polytechnique Federal de Lausanne-EPFL, Switzerland

**Course Title
and
Description**

Life-Cycle of Polymers

Within the Life-Cycle of Polymers Project we will develop 6 hours virtual classes, where Dr. Yves Leterrier will present to the students of the Master Degree in Product Innovation Engineering, the main concepts of sustainability, durability, life-cycle assessment and recycling of polymers.

During the autumn semester of a.a. 2021-22, Dr. Leterrier will give 3 lectures (2 hours each, one per week) to bring in the students to the Project team-work (this is an already consolidated part of the course programme). During the first lecture, Dr Leterrier will introduce the concepts of sustainability, life-cycle of a product and its environmental impact, using the material intensity approach with a case study of skis. During the second lecture he will present a systematic approach to analyze the durability of polymer-based materials, illustrated with a case study of automotive components. The third lecture will focus on recycling of polymers based on an original analysis of the process-structure- property relations for open-loop and closed-loop recycling.

Period

03/11/2021 – 22/12/2021

Course Level

Master Degree Course in Ingegneria dell'Innovazione del Prodotto