

Name of the Lecture	Physicochemical Characterization Of Scaffolds
Level of the Lecture	Graduate
Length of the Lecture	25 minutes
Type of the Lecture	Online
Lecturer	Isabelle Pezron
Lecturer Email	isabelle.pezron@utc.fr
Aim of the Lecture	We will explore physico-chemical properties of polymer solutions and gels, and focus on biopolymer (e.g. collagen) hydrogels and their application in bioprinting.
Content of the lecture	<ol style="list-style-type: none"> 1) Physico-chemical properties of polymer solutions <ul style="list-style-type: none"> - basic polymer chain structure and conformation - concentration regimes - phase diagrams - associative effects and gel formation 2) Sol-gel transition mechanisms <ul style="list-style-type: none"> - physical gels (weak interactions) - chemical gels (cross-linking) 3) Biopolymer hydrogels 4) Bioprinting applications
Recommended Sources	-
Language of the lecture	English
Learning Outputs	<p>Introduce the basic behaviour of polymer solutions</p> <p>Understand the main mechanisms of polymer gel formation</p> <p>Explore the characteristic properties of biopolymer hydrogels used in scaffold elaboration (e.g. bioprinting applications).</p>