Bioprinting Winter School - IV edition - 2026*

From printing set-up to laboratory analysis | bioprintingwinterschool (unipv.it)

DAY 1: Monday, 23th February 2026 - 3D (bio)printing technologies, from segmentation to G-code				
9:00-9.30	Polo Ingegneria - Aula 8	**Registration**		
9.30-10.00		**Welcom e and School introduction**	Conti M. (UniPV)	Overview of the program and school goals
10.00-10.30		**Additive Manufacturing. A world full of opportunities and challenges!**	Auricchio F. (UniPV)	Overview about AM and 3D@UniPV
10.30-11.00	Aula studio 2° piano	**Coffee Break**		
11.00-12.30	Polo Ingegneria - Aula 8	**Developing green and non-toxic biomaterials, derived from renewable sources and processable through 3D bioprinting technologies**	Vozzi G. (UniPI)	Perspective talk about Bioprinting
12.30-13.00		**Pectin-based biomaterials: a portfolio of green bioinks for a wide range of applications from biofabrication to drug testing and delivery**	Di Stasi M. (UniPI)	Green bioinks for biofabrication
13.00-14.00	Aula studio 2° piano	**Lunch**		
14.00-16.00	Polo Ingegneria - Aula 8	**Introduction to patient-specific modeling and CAD**	Marconi S. (UniPV)	Creation of a patient-specific models from medical images and fundamentals of CAD
16-00-16.30	Aula studio 2° piano	**Coffee Break**		
16.30-18.00	Polo Ingegneria - Aula 8	**CAD design and slicing**	Marconi S. (UniPV)	From the 3D virtual model to the 3D printing instructions (Gcode)
18.00-19.00		**Student project preparation**		
DAY 2: Tuesday, 24th February 2026 - Bio-ink formulation and printability				
9.00-10.30	Polo Ingegneria - Aula 8	**Functional strategies and synthetic approaches in 3D printing**	Russo L. (UniMIB)	Design of novel biomaterials and AI prediction
10.30-11.00	Aula studio 2° piano	**Coffee Break**		
11.00-11.45	Polo Ingegneria - Aula 8	**Introduction to rheology**	Chiesa I., Bonatti A. (UniPI)	Fundamental principle in rheology
11.45-13.00		**Rheological characterization of biomaterial ink and bioink**	Chiesa I., Bonatti A. (UniPI)	How to assess the printability of a bio-ink
13.00-14.00	Aula studio 2° piano	**Lunch**		
14:00-16:00	Lab. di Chirurgia Sperimentale	**Biomaterial ink printability assessment - hands-on (1)**	UniPI-UniPV team	Printing the biomaterial ink and assessing shape fidelity
16-00-16.30		**Coffee Break**		
16.30-18.00		**Biomaterial ink printability assessment - hands-on (2)**	UniPI-UniPV team	Printing the biomaterial ink and assessing shape fidelity
18.00-19.00		**Student Project Preparation**		
DAY 3: Wednesday, 25th February 2024 - Cells and read-out				
9.00-10.00	Polo Ingegneria - Aula 8	**Intro: How to create a preclinical 3D bioP model**	Scielzo C. (HSR)	3D printing cells for disease modelling and read-out strategies (post-printing)
10.00-10.45		**Readout strategies for 3D bioprinted models characterization**	Cellani M. (HSR)	
10.45-11.15	Aula studio 2° piano	**Coffee Break**		
11.15-11.45	Polo Ingegneria - Aula 8	**Design and development of a modular bioreactor for selective perfusion of 3D scaffolds**	Pinos R. (HSR)	Post-printing: bioreactor.
11.45-12.45		**Quality control**	Lamprou D. (QubAC)	Standardization process and quality control in bioprinting
12.45-13.45	Aula studio 2° piano	**Lunch**		
13.45-15.45	Lab. Chirurgia Sperimentale	**Bioink including cells and read-out - hands-on (1)**	HSR-UniPV team	Cell culture; bioink preparation; read-out
15.45-16.15		**Coffee Break**		
16.15-17.45		**Bioink including cells and read-out - hands-on (2)**	HSR-UniPV team	Cell culture; bioink preparation; read-out
17.45-18.45		**Student project preparation**		
20.00-23.00		**Social event**		
DAY 4: Thursday, 26th February 2024				
9:00-10.00	Polo Ingegneria - Aula 8	**Mechanical characterization**	Marino M. (UniTOV)	Mechanical assessment of 3D printed model
10.00-11.00		**Nanoindentation of Bio-Structured Materials**	Greco G. (UniPV)	Principle in nanoindentation and applications
11.00-11.30	Aula studio 2° piano	**Coffee Break**		
11.30-12.30	Polo Ingegneria - Aula 8	**Designing a bioprinted model, an engineering perspective**	Conti M. (UniPV)	Designing bioprinted models from an engineering perspective, focusing on techniques, materials, and strategies
12.30-13.30	Aula studio 2° piano	**Lunch**		
13.30-15.00	Polo Ingegneria - Aula 8	**Student project preparation and project fine tuning**		
15.00-15.30	Aula studio 2° piano	**Coffee Break**		
15.30-18.00	Polo Ingegneria - Aula 8	**Project presentation, mentoring & wrap-up of the school**	Lecturers	Q&A session - take home messages