

Utrecht Summer School: ‘3D Printing and Biofabrication’, July 2025					Program
		Time	Location	Topic	Speaker
Monday	14-jul	9.30 - 10.00	UMC Heidelberglaan 100 Blue college room	Check in and coffee	
		10.00 - 10.15		Welcome & Course Overview	Jos Malda (UMCU, Netherlands)
		10.15 - 10.40		Student Introductions	Estee Grandidier (UMCU, Netherlands)
		10.40 - 11.15		Basics of Additive Manufacturing	Riccardo Levato (Utrecht University, Netherlands)
		11.10 - 11.45		3D technology in modern healthcare	Chien Nguyn (UMCU, Netherlands)
		11.45 - 12.45		Lunch (included)	
		12.45 - 13.15		Multiphoton lithography and high defention 3D printing	Aleks Ovsianikov
		13.15 - 13.45		Integrating additive manufacturing & AI	Andrew Daly
		13.45 - 14.15		Medical 3D Planning and Printing: Optimal Medical Solutions for Better Clinical Outcomes	Arsham Makaryan (Materialise NV, Belgium)
		14.15 - 14.30		Coffee break	
		14.30 - 15.45		Generation of 3D anatomical models using medical data	Arsham Makaryan (Materialise NV, Belgium)
		15.45 - 16.15		Bioprinting hydrogels to engineer functional tissue mimics	Tina Vermonden
		16.15 - 17.00		Bioprinting at organ Scale	Mark Skylar-Scott (Stanford, USA)
		17.00 - 17.15		Explaining assignments	Jos Malda / Riccardo Levato
Tuesday	15-jul		University of Applied Science		
		9.00 – 9.30	Location: Padualaan 99	Introduction fablab	Joris van Tubergen
Workshop 3D Printing		10.00 - 12.00	Start workshops, choosing 1 out of 3.	1. Getting to know the firmware: introduction to gcode and using it on bioprinting, z-corp) 2. workflow introduction, 3D drawing (tinkercad) & printing 3. Hands-on machinework with different material (porcelain, chocolate, PLA)	1. Gabriel Groesbacher 2. Bram Nijhof 3. Joris van Tubergen
		12.00 - 13.00		Lunch with lecture about scanning for prostheses	
		13.00 – 15.30	Start workshops, choosing 1 out of 3.	1. Getting to know the firmware: introduction to gcode and using it on bioprinting, z-corp) 2. workflow introduction, 3D drawing (tinkercad) & printing 3. Hands-on machinework with different material (porcelain, chocolate, PLA)	1. Gabriel Groesbacher 2. Bram Nijhof 3. Joris van Tubergen
		15.45 - 17.45	Start workshops, choosing 1 out of 3.	1. Getting to know the firmware: introduction to gcode and using it on bioprinting, z-corp) 2. workflow introduction, 3D drawing (tinkercad) & printing 3. Hands-on machinework with different material (porcelain, chocolate, PLA)	1. Gabriel Groesbacher 2. Bram Nijhof 3. Joris van Tubergen
		18.00	End		
Wednesday	16-jul		UMC		
Applications of 3D biofabrication		08.30 - 09.00	Heidelberglaan 100 Blue college room	Introduction to Regenerative Medicine & Stem Cells	Bernard Roelen (Utrecht University, Netherlands)
		09.00 - 09.45		From biomedical bioprinting to biotechnology and towards space	Michael Gelinsky (TU Dresden, Germany)
		09.45 - 10.00		Coffee break	
		10.00 - 10.30		Two photon lithography for neural tissue engineering	Angelo Accardo - TU Delft
		10.30 - 11.15		Robotics Technologies for Bioprinting	Giovanni Vozzi - Pisa
		11.15 - 11.45		Electrowriting in tissue engineering and biofabrication	Tomasz Juengst
		11.45 - 13.00		Meet the expert - Lunch	
		13.00 - 13.45		Microfluidics based bioprinting	Wojciech Świążkowski
		13.45 - 14.15		Regulatory aspects in biofabrication and medical 3D printing	Hanneke Later Nijland (Genome Lawyers)
		14.15 -14.45		Organ on-a-chip technologies	Andries van der Meer (Twente University, Netherlands)
		14.45 -15.00		Coffee break	
		15.00 - 15.30		Jammed Microgels for Fabrication of Heterogeneous Architectures	Malgorzata Wlodarczyk-Biegun (RU Groningen)
		15.30 - 16.00		Electrowriting in tissue engineering	Juergen Groll (Wuerzburg University, Germany)
		16.00 - 17.30		Work on assignment	
Thursday	17-jul		Hubrecht / RMCU Uppsalaalan 8		
Applications of 3D biofabrication		8.45 - 09.15	Auditorium 08.30 -12.45	Volumetric Bioprinting for Fabrication of Highly Complex Living Structures	Paulina Nunez Bernal (UMCU, Netherlands)
		09.15 - 9.45		Biofabrication to boost cellular agriculture	Lorenzo Moroni
		9.45 - 10.00		Coffee break	
		10.00 - 10.30		Printing cartilage	Jos Malda
		10.30 - 11.00		Liver bioprinting	Bart Spee (Utrecht University, Netherlands)
		11.00 - 11.30		How to advance myocardial repair - Printing cardiac tissue?	Alain van Mil (UMC Utrecht)
		11.30 - 12.00		Building a (vascularized) proximal tubule	Anne Metje van Genderen (Utrecht University, Netherlands)
		12.00 - 13.00		Lunch (included)	
		13.00 - 14.00		Perspectives in the biofabrication industry	Jasper van Hoorik (BioINX), (Poietis), Eva van Ingen (ICAT), Anke de Leeuw (regenHu), Pierre-Alexandre Laurent (Cellink)
		14.00 - 17.15		Laboratory tour and 3D bioprinting workshop	
				Station 1 - Meet the Industry (Extrusion printing; RegenHU)	Paulina Nunez Bernal (UMCU, Netherlands)/ RegenHU
				Station 2 - Melt Electrowriting	
				Station 3 - Volumetric printing and DLP	Sammy Florczak
				Station 4 - LIFT printing	Nuria Gines Rodriguez
				Station 5 - Microfluidics and Organ-on-a-chip	Mohammad Jouy Bar
				Station 6 - Meet the Industry (BioINX)	Industry representatives + booth in the green area
		17.15 - 18.00		Work on assignment	
Friday	18-jul	9.00 - 9.30	UMC	Key collection	Riccardo Levato
Presentations Assignments Wrap up		9.30 - 10.30	Heidelberglaan 100	Lecture	Leo Otsuki
		10.30 - 12.00	Blue college room	Student presentations	
		12.00 - 12.15		Announcement of award for best presentation	
		12.15 - 12.45		Wrap-up	
		12.45 - 14.00		Class Lunch (included)	