'3D Printing and Biofabrication' July 2024 **Program**

		Time	Location	Topic	Speaker
Monday	**15-Jul**	**9.30 - 10.00**	**UMC**	Check in and coffee	
		10.00 - 10.15	**Heidelberglaan 100**	Welcome & Course Overview	Jos Malda (UMCU, Netherlands)
		10.15 - 10.40	**Yellow college room**	Student Introductions	Alba (UMCU, Netherlands)
		10.40 - 11.10		Basics of Additive Manufacturing	Riccardo Levato (Utrecht University, Netherlands)
		11.10 - 11.45		UltiMaker, a multidisciplinary company to unlock new applications	TBA
		11.45 - 12.45		**Lunch (Included)**	
		12.45 - 13.15		3D technology in modern healthcare	Chien Nguyn (UMCU, Netherlands)
		13.15 - 13.45		Integrating additive manufacturing & AI	Bianca Maria Colosimo (Politecnico Milano, Italy)
		13.45 - 14.15		**Coffee break**	
		14.15 - 14.45		Medical 3D Planning and Printing: Optimal Medical Solutions for Better Clinical	Arsham Makaryan (Materialise NV, Belgium)
		14.45 - 16.00		Generation of 3D anatomical models using medical data	Arsham Makaryan (Materialise NV, Belgium)
		16.00 - 16.30		Hydrogels to bioprint functional tissue mimics	Oksana Dudaryeva (UMCU, Netherlands)
		16.30 - 17.30		Explaining assignments	Jos Malda / Riccardo Levato
Tuesday	**16-Jul**	8.15 - 9.00	**University of Applied Science**		
		9.00 – 9.30	**Location: Padualaan 99**	Introduction fablab	Joris van Tubergen
		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. Marry Bassa 3. Joris van Tubergen
		12.00 - 13.00		**Lunch with lecture about scanning for protheses**	
Workshop 3D Printing		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. Marry Bassa 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. Marry Bassa 3. Joris van Tubergen
		17.45 - 18.00		Wrap-up	
Wednesd	**17-Jul**		**UMC**		
		08.30 - 09.00	**Heidelberglaan 100**	Introduction to Regenerative Medicine & Stem Cells	Bernard Roelen (Utrecht University, Netherlands)
		09.00 - 09.45	**Yellow college room**	From biomedical bioprinting to biotechnology and towards space exploration	Michael Gelinsky (TU Dresden, Germany)
		09.45 - 10.10		**Coffee break**	
		10.10 - 10.45		Multiphoton Lithography for Biomedical Applications	Aleksandr Ovsianikov (TU Wien, Austria)
		10.45 - 11.45		High resolution printing and 4D biomaterials functionalization	Cole DeForest (University of Washington, USA)
Applications of 3D biofabrication		**11.45 - 13.00**		**Meet the experts lunch**	
		13.00 - 13.40		Biossembly of cells and materials for biofabrication	João Mano (University of Aveiro, Portugal)
		13.40 - 14.10		Regulatory aspects in biofabrication and medical 3D printing	Hanneke Later Nijland (Genome Lawyers)
		14.10-14.40		Organ on-a-chip technologies	Andries van der Meer (Twente University, Netherlands)
		14.40 - 15.00		**Coffee break**	
		15.00 - 15.30		Electrowriting in tissue engineering	Tomasz Jungst (Wuerzburg University, Germany)
		15.30 - 17.00		Work on assignment	
Thursday	**18-Jul**		**Hubrecht / RMCU**		
		8.45 - 09.15	**Uppsalalaan 8**	Volumetric Bioprinting for Fabrication of Highly Complex Living Structures	Paulina Nunez Bernal (UMCU, Netherlands)
		09.15 - 9.45		Biofabrication to boost cellular agriculture	Matt Baker (Maastricht University, Netherlands)
Applicatio ns of 3D		**9.45 - 10.00**	**Auditorium 08.30 -12.45**	**Coffee break**	
		10.15. 10.50		Printing cartilage	Mylene de Ruijter (UMCU, Netherlands)
		10.50 - 11.15		Adult Stem Cells for Advanced In Vitro Models and Whole Organ Engineering.	Bart Spee (Utrecht University, Netherlands)
		11.15 - 11.45		How to advance myocardial repair - Printing cardiac tissue?	Alain van Mil (UMCU, Netherlands)
		11.45 - 12.15		Building a (vascularized) proximal tubule	Anne Metje van Genderen (Utrecht University, Netherlands)
		12.15 - 13.00		**Lunch (included)**	
		13.00 - 14.15	**Room 3**	Perspectives in the biofabrication industry	*Jasper van Hoorik (BioINX), Fabien Guillemot (Poietis), Mauro Petretta (regenHu), Cathrin Schuly (Cellink), Guilleaume Feliksdal (Felix robotics)*
		14.00 - 17.30		Laboratory tour and 3D bioprinting workshop	
				Station 1 - Extrusion printing	Davide Ribezzi
				Station 2 - Melt Electrowriting	Gabriel Groessbacher
				Station 3 - Volumetrci printing and DLP	Sammy Florczak
				Station 4 - LIFT printing	Fabien Guillemot
				Station 5 - Microfluidics and Organ-on-a-chip	Nuria Rodriguez
				Station 6 - Meet the Industry (BioINX, Poietis, BICO, Felix robotics, RegenHU)	Industry representatives + booth in the green area
		17.30 - 18.00		Work on assignment	
Friday	**19-Jul**	9.00 - 9.30	**UMC**	Key collection	Riccardo Levato
		9.30 - 10.30	**Heidelberglaan 100**	Student presentations	
		10.30 - 12.00	**Yellow college room**	New frontiers in extrusion, light-based and ultrasound-based biofabrication	Yu Shrike Zhang (Harvard University, USA)
Presentations		12.00 - 12.15		Announcement of award for best presentation	
Assignments		12.15 - 12.45		Wrap-up	
Wrap up		12.45 - 14.00		**Class Lunch (included)**	