Utrecht Summer School: '3D Printing and Biofabrication', July 2022		Program			
		Time	**Location**	**Topic**	Speaker
Monday	**11-jul**	**9.30 - 10.00**	**UMC**	Check in and coffee	
		10.00 - 10.10	**Blue lecture hall**	Welcome & Course Overview	Jos Malda
		10.10 - 10.20		Course program	
		10.20 - 10.45		Student Introductions	Madison Ainsworth
		10.45 - 11.45		Basics of Additive Manufacturing	Riccardo Levato
		11.45 - 12.45		**Lunch (Included)**	
		12.45 - 13.15		3D printing of metals	Saber Amin Yavari
		13.15 - 13.45		3D printing and microfluidics technologies	Yang Li
		13.45 - 14.15		**Coffee break**	
		14.15 - 14.45		3D printing and Ultimaker	Kristel Boere (Ultimaker)
		14.45 - 15.15		Medical 3D Planning and Printing: Optimal Medical Solutions for Better Clinical Outcomes	Arsham Makaryan (Materialie NV)
		15.15 - 16.45		Generation of 3D anatomical models using medical data	Arsham Makaryan (Materialie NV)
		16.45 - 17.30		Explaining assignments	Jos Malda / Riccardo Levato
Tuesday	**12-jul**	8.15 - 9.00	**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. Marry Bassa 3. Joris van Tubergen
		12.00 - 13.00		**Lunch with lecture about scanning for protheses**	
		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
		18.00	End		
Wednesday	**13-jul**	8.45 - 9.30	**UMC**	Can a printer solve patient-specific challenges?	Harrie Weinans
Applications of 3D biofabrication		9.30 - 10.00	**Blue lecture hall**	Introduction to Regenerative Medicine & Stem Cells	Bernard Roelen
		10.00 - 10.15		**Coffee break**	
		10.15 - 10.45		3D (bio)printing for Medical Technologies and Space Research and Exploration	Michael Gelinsky
		10.45 - 11.15		Volumetric bioprinting and light-based printing	Paulina Nunez Bernal
		11.15 - 11.45		Multiphoton polymerization printing	Aleksandr Ovsianikov
		11.45 - 13.00		**Meet the expert lunch (Included)**	
		13.00 - 13.30		Electrospinning and Electrowriting technologies	Andrei Hrynevic
		13.30 - 14.00		Hydrogel design in bioprinting	Mark Tibbit
		14.00 - 14.25		Printing Cartilage	Mylene de Ruijter
		14.25 - 14.45		**Coffee break**	
		14.45 - 15.15		Regulatory requirements and developments with respect to 3D (bio)printing	Hanneke Later Nijland
		15.15 - 17.00		Work on assignment	
Thursday	**14-jul**		**Hubrecht**		
		8.45 - 9.15		TBD	Juergen Groll
Applications of 3D		9.15 - 9.45	**Room 3**	TBD	Lorenzo Moroni
		9.45 - 10.00		**Coffee break**	
		10.00 - 10.25		Printing bone and in vitro model	Marisa Assuncao
		10.25 - 10.50		Printing Liver	Bart Spee
		10.50 - 11.15		Printing of cardiac tissue grafts	Joost Sluiter
		11:15 - 12:00		Biofabrication and kidney regeneration	Nuria Montserrat (online)
		12.00 - 13.00		**Lunch (included)**	
		13.00 - 16:30		Laboratory tour and 3D bioprinting workshop	
				Station 1 - Extrusion printing	Davide Ribezzi
				Station 2 - Melt Electrowriting	Andrei Hrynevic
				Station 3 - Volumetrci printing and DLP	Sammy Florczak
				Station 4 - Microfluidics and Organ-on-a-chip	Yang Li
				Station 5 - Meet the Industry (BioINX)	Industry representatives + booth in the gre
		16.30 - 18.00		Work on assignment	
Friday	**15-jul**	9.00 - 9.30	**UMC**	Key collection	Riccardo Levato
		9.30 - 10.30	**Blue lecture hall**	TBD	Shrike Zhang
Presentations assignments Wrap Up		10.30 - 12.00		Presentations	
		12.00 - 12.15		Announcement of award for best presentation	
		12.15 - 12.45		Wrap-up	
		12.45 - 14.00		**Class Lunch (included)**	