

| Utrecht Summer School: ‘3D Printing and Biofabrication’, July 2025 | | | | Program | |
|---|--------|---------------|---|---|---|
| | | Time | Location | Topic | Speaker |
| Monday | 14-Jul | 9.30 - 10.00 | UMC Heidelberglaan 100 ??? 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 - 11.10 | | 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 definition 3D printing | Aleksandr Ovsianikov (TU Wien, Austria) |
| | | 13.15 - 13.45 | | Integrating additive manufacturing & AI | Andrew Daly (University of Galway, Ireland) |
| | | 13.45 - 14.15 | | Coffee break | |
| | | 14.15 - 14.45 | | Medical 3D Planning and Printing: Optimal Medical Solutions for Better Clinical Outcomes | 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 | | Bioprinting hydrogels to engineer functional tissue mimics | Tina Vermonden |
| | | 16.30 - 17:20 | | Bioprinting at organ scale | Mark Skylar-Scott (Stanford University, USA) |
| | | 17.20 - 17.30 | | Explaining assignments | Jos Malda / Riccardo Levato |
| Tuesday | 15-Jul | 8.15 - 9.00 | University of Applied Science | | |
| Workshop 3D Printing | | 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. Bram Nijhof 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. 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 ??? 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 - 10.10 | | Coffee break | |
| | | 10.10 - 10.45 | | Two photon lithography in biofabrication | Angelo Accardo (TU Delft, Nethelands) |
| | | 10.45 - 11.45 | | Robotics technologies for bioprinting | Giovanni Vozzi (University of Pisa, Italy) |
| | | 11.45 - 13.00 | | Meet the expert lunch (Included) | |
| | | 13.00 - 13.40 | | Microfluidics-based bioprinting | Wojciech Świąszkowski (TU Warsaw, Poland) |
| | | 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 | Malgorzata Wlodarczyk-Biegun (RU Groningen) |
| | | 15.00 -15.30 | | Electrowriting in tissue engineering | Juergen Groll (Wuerzburg University, Germany) |
| | | 15.30 - 17.00 | | Work on assignment | |
| Thursday | 17-Jul | | Hubrecht / RMCU Uppsalalaan 8 | | |
| Applications of 3D | | 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 (Maastricht University, Netherlands) |
| | | 9.45 - 10.00 | | Coffee break | |
| | | 10.15- 10.50 | | Printing cartilage | Jos Malda (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 (UMC Utrecht, Netherlands) |
| | | 11.45 - 12.15 | | Building a (vascularized) kidney proximal tubule | Anne Metje van Genderen (Utrecht University, Netherlands) |
| | | 12.00 - 13.00 | | Lunch (included) | |
| | | 13.00 - 14.00 | Room 3 | Perspectives in the biofabrication industry | Jasper van Hoorik (BioINX), Anke de Leeuw (regenHu) |
| | | 14.00 - 17.15 | | Laboratory tour and 3D bioprinting workshop | |
| | | | | Station 1 - Extrusion printing | Paulina Nunez Bernal |
| | | | | Station 2 - Melt Electrowriting | Lennard Spauwen |
| | | | | Station 3 - Volumetrci 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, Poietis, BICO, RegenHU) | 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 | Keynote Lecture - Regeneration and Biofabrication: learning from Nature | Leo Otsuki (IMBA, Austria) |
| | | 10.30 - 12.00 | ??? 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) | |