

EMERALD International Summer School on 3D Printing in Bio-mechatronics – 12-23 September 2022

h	Monday 12.09.2022	Tuesday 13.09.2022	Wednesday 14.09.2022	Thursday 15.09.2022	Friday 16.09.2022	Saturday 17.09.2022	Monday 19.09.2022	Tuesday 20.09.2022	Wednesday 21.09.2022	Thursday 22.09.2022	Friday 23.09.2022	h
10	Opening ceremony and project presentation	CAD - Lecture	CAE - Lecture	3D printing and Rapid Tooling for mechatronics	Applications of 3D printing in pre- and inter-operative surgery	Progress report (preparing of the interim report for Monday - working on smaller groups)	General progress of W1 and objectives of W2	Intelligent (smart) materials	Metrology of mechatronic systems	Finalizing progress report, preparing final presentation	Presentations made by students for companies involved in the summer school - evaluation and feedback on behalf of the companies, defining of common ideas of future diploma projects	10
11	Participants' presentation and program guidelines for summer school	Workshop 3D / Launching of case studies	Workshop 3D CAE	Workshop 3D Printing	Enterprise dynamics (workshop)		Students' presentation (interim report + scientific presentations)					Feedback on behalf of the EMERALD experts and guidelines for W2
12	Lunch & free time	Lunch & free time	Lunch & free time	Lunch & free time	Lunch & free time	Lunch & free time	Lunch & free time	Lunch & free time	Lunch & free time	Lunch & free time	Lunch & free time	12
13	Introduction to Biomechanics	Workshop 3D CAD	VR and AR programming applications presentation, case studies	Actuators: theory	Presentation on behalf of Leycom company and Admasys companies from Romania	Preparing of scientific presentations for Monday (working in smaller groups)	Self-study of documentation (robotic arm) + interaction with student assistants	Admittance vs impedance control (programming)	Assembly and testing control	Final student presentations, live demonstrations, test corrections	Closing and awarding ceremony, future perspectives of the EMERALD project	13
14	Visiting of MIL laboratories	Sensors: theory	Developing of VR /AR applications	Actuators: programming (robotic arm)	Presentation on behalf of OMNI 3D company from Poland		Bio-mechatronics: programming					Finalizing work on assembly, preparing final presentation
15	Visiting of i4Helse laboratories	Sensors: programming (robotic arm)		Progress report and summary	Presentation on behalf of Blatchford company in Norway	Boat trip in Kristiansand region, visiting of fiords	Programming case studies	Free time, sightseeing	15			
WEEK 1						WEEK 2						