

Program for the CAS course on "Mechanical & Materials Engineering" November 2020

	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Mer	Thu	Fri	Sa	Su		
08:00		Opening														
08:30		recap_D I (static, strength of materials)	Comp.Tools I (design)	Comp. Tools II (fabrication)	steels & stainless steels I	forming	Add. Manufacturing/powders		Collider basics & technologies	composite materials	RFQs	Targets/collimators I/materials	The "typical" project (management)/system engineering			
09:30		recap_Materials	plastics	design principles	design to cost	non ferrous materials	mechanical testing		vacuum	NC magnets	cryostats and cryomodules	Alignment and metrology – Requirements and	fabrication summary			
10:30		Coffee							Coffee							
11:00		recap_D II (dynamics & stability)	radiation damage to materials	machining	steels & stainless steels II/magnetic materials	design for Additive Manufacturing	CAD (lifecycle), Tolerances		surface treatment & coating	beam instrumentation	Vacuum brazing	SC magnets	present case study results			
12:00		physical properties&testing	non destructive testing	standards/safety	welding I	welding II	large structures		mechanical measurements	undulators	Targets/collimators II/radiation qualification	RF	present case study results			
13:00		Lunch							Lunch							
14:30		metrology I	Metrology (1-20) Design (1-30) NDT (1-10)	Metrology (1-20) Design (1-30) NDT (1-10)	Free (work on Case study)	Metrology (21-40) Design (31-60) NDT (11-20)	Metrology (21-40) Design (31-60) NDT (11-20)		Mech. Meas. (1-20) Fabrication (1-30) Visits (1-10)	Mech. Meas. (21-40) Fabrication (31-60) Visits (11-20)	Free (work on Case study)	Mech. Meas. (1-20) Fabrication (1-30) Visits (1-10)	Mech. Meas. (21-40) Fabrication (31-60) Visits (11-20)			
15:30		metrology II/uncertainty theory	Metrology (1-20) Design (1-30) NDT (1-10)	Metrology (1-20) Design (1-30) NDT (1-10)		Metrology (21-40) Design (31-60) NDT (11-20)	Metrology (21-40) Design (31-60) NDT (11-20)		Mech. Meas. (1-20) Fabrication (1-30) Visits (1-10)	Mech. Meas. (21-40) Fabrication (31-60) Visits (11-20)		Mech. Meas. (1-20) Fabrication (1-30) Visits (1-10)	Mech. Meas. (21-40) Fabrication (31-60) Visits (11-20)			
16:30		Coffee							Coffee							
17:00		metrology II/uncertainty theory	Metrology (1-20) Design (1-30) NDT (1-10)	Metrology (1-20) Design (1-30) NDT (1-10)		Metrology (21-40) Design (31-60) NDT (11-20)	Metrology (21-40) Design (31-60) NDT (11-20)		Mech. Meas. (1-20) Fabrication (1-30) Visits (1-10)	Mech. Meas. (21-40) Fabrication (31-60) Visits (11-20)		Mech. Meas. (1-20) Fabrication (1-30) Visits (1-10)	Mech. Meas. (21-40) Fabrication (31-60) Visits (11-20)			
18:00																
18:30	Dirac	Welcome Event		Seminar I		Seminar II			Seminar III	Contamination control (1-20)		Contamination control (21-40)	Closing Schmickler			
19:30							Dinner			cinema evening			gala dinner			