

Schedule for **BMEGEPTBGE1**
Composites technology
2024 spring semester

Week	Contact hours			Date	Lecture Monday 10:15-12:00 (room T200)	Laboratory practice Monday 14:15-16:00 (MT building laboratory)
	Lec.	Sem.	Lab.			
1	2	-	-	12/02	Introduction to thermoset composites.	
2	2	-	2	19/02	Typical composite matrix materials: properties and applications.	Introduction to resins, reinforcement fibres, structures
3	2	-	-	26/02	Typical reinforcing materials of polymer composites. Reinforcing structures, properties and applications.	
4	2	-	2	04/03	Basics of composite mechanics 1.: types of material behaviour, rules of mixtures, estimation of composite stiffness, strength, thickness	Characterisation of reinforcement structures
5	2	-	-	11/03	Group project specification, mandatory seminar on the design of test plates	
6	2	-	2	18/03	Manufacturing technologies of thermoset matrix polymer composites: 1.: overview, wet lay-up, spray-up	Group project workshop
7	2	-	-	25/03	Wet manufacturing technologies of thermoset matrix polymer composites 2.: RTM, infusion techniques	
8	2	-	2	08/04	Wet manufacturing technologies of thermoset matrix polymer composites 3.: pultrusion, filament winding, centrifugal casting Test plate design approval deadline!	Manufacturing of test plates
9	2	-	-	15/04	Dry manufacturing technologies of thermoset matrix polymer composites: BMC, SMC compression moulding, autoclave curing of prepregs	
10	2	-	2	22/04	Mechanics of composite materials 2.: Laminate code, stiffness matrix of a composite ply	Specimen fabrication
11	2	-	-	29/04	Mechanics of composite materials 3.: Composite plates under tension	
12	2	-	2	06/05	Mechanics of composite materials 4.: Composite plates under bending	Mechanical testing
13	2	-	-	13/05	Technical report submission and presentation, consultation	
14	-	-	-	20/05 NATIONAL HOLIDAY!	<i>Damage and failure of polymer composites, testing and approving methodologies (Video lecture)</i>	