

Materials Science I schedule – summer semester 2017/18

Lectures: **Tuesday 14:15 – 15:45, room KN: A-312**

Lecturers: prof. Dr. Ing. Libor Beneš, IWE (**BEN**) and Ing. Jakub Horník, Ph.D. (**HOR**)

	Date	Lecturer	Topic
1	20.2.2018	BEN	Introduction: Examples of materials and their design
2	27.2.2018	BEN	Theoretical fundamentals of Materials science
3	6.3.2018	HOR	Crystal lattices and their defects, Miller indices
4	13.3.2018	HOR	Recovery and recrystallization
5	20.3.2018	BEN	Stress and strain
6	27.3.2018	BEN	Heat and mass transfer
7	3.4.2018	HOR	Fundamental thermodynamic terms and laws
8	10.4.2018	HOR	Binary and ternary equilibrium diagrams
9	17.4.2018	HOR	Phases and phase transformations / Iron-carbon phase diagram - I
10	24.4.2018	BEN	Phases and phase transformations / Iron-carbon phase diagram - II
11	1.5.2018	-	International Workers' Day → compensation on 22.5.2018
12	8.5.2018	-	Victory in Europe Day → compensation on 17.5.2018
13	15.5.2018	BEN	Development of failure and fracture (mechanisms & classification)
14	17.5.2018	HOR	Mechanical (technological) properties and their testing - I
15	22.5.2018	BEN	Mechanical (technological) properties and their testing - II

Laboratory works: **Thursday 10:45 – 12:15, room KN: B-37, KN: B-40**

Course tutor: Ing. Jan Krčil (**KRC**) and Ing. Vladimír Mára (**MAR**)

	Date	Topic	
		GROUP A - MAR	GROUP B - KRC
1	1.3.2018	Introduction, requirements	Introduction, requirements
2	15.3.2018	Cast iron	Cast iron
3	29.3.2018	Impact test	Impact test
4	12.4.2018	Tensile test of steel	Tensile test of steel
5	26.4.2018	Hardness testing	Hardness testing
6	3.5.2018	Presentation of semester work	Presentation of semester work
7	15.5.2018	Presentation of semester work	Presentation of semester work
8	29.5.2018	Examination test, graded assessments	Examination test, graded assessments
9	5.6.2018	Examination test, graded assessments	Examination test, graded assessments

Contacts:

prof. Dr. Ing. Libor Beneš, IWE

libor.benes@fs.cvut.cz

Ing. Jakub Horník, Ph.D.

jakub.hornik@fs.cvut.cz

Ing. Jan Krčil

jan.krcil@fs.cvut.cz



Department of Materials Engineering

Karlovo náměstí 13, Praha 2, 121 35



Ing. Vladimír Mára

vladimir.mara@fs.cvut.cz