

Data:	TM. MA. Nr. 3222 / Examination number: 51015	Version: 09.07.2024 	Start Year: WiSe 2024
Module Name:	Thermodynamics of Materials		
(English):			
Responsible:	Leineweber, Andreas / Prof. Dr. rer. nat. habil.		
Lecturer(s):	Fabrichnaya, Olga / Dr.		
Institute(s):	Institute of Materials Science		
Duration:	1 Semester(s)		
Competencies:	The students understand thermodynamic properties of materials and are able to apply calculation methods of phase diagrams.		
Contents:	Most important topics are: Thermodynamic laws and quantities Thermodynamic properties of materials Calculation of complex equilibria in multiphase and multicomponent systems Optimization of phase diagrams		
Literature:	Mats Hillert, "Phase equilibria, phase diagrams and phase transformations", 2nd Ed., Cambridge (2009) Robert de Hoff, "Thermodynamics in Materials Science", 2nd Ed., Taylor & Francis (2006) Hans Leo Lukas, Suzana Fries, Bo Sundman, "Computational Thermodynamics, the CALPHAD method", Cambridge (2007)		
Types of Teaching:	S1 (WS): Lectures (2 SWS) S1 (WS): Seminar (1 SWS)		
Pre-requisites:	Recommendations: Background in physical chemistry and materials science		
Frequency:	yearly in the winter semester		
Requirements for Credit Points:	For the award of credit points it is necessary to pass the module exam. The module exam contains: MP/KA (KA if 6 students or more) [MP minimum 30 min / KA 120 min] PVL: task exercises (in the seminar) PVL have to be satisfied before the examination. Voraussetzung für die Vergabe von Leistungspunkten ist das Bestehen der Modulprüfung. Die Modulprüfung umfasst: MP/KA (KA bei 6 und mehr Teilnehmern) [MP mindestens 30 min / KA 120 min] PVL: Übungsaufgaben PVL müssen vor Prüfungsantritt erfüllt sein bzw. nachgewiesen werden.		
Credit Points:	4		
Grade:	The Grade is generated from the examination result(s) with the following weights (w): MP/KA [w: 1]		
Workload:	The workload is 120h. It is the result of 45h attendance and 75h self-studies.		

Freiberg, den 26. September 2024

gez.
 Prof. Dr. Klaus-Dieter Barbknecht
 Rektor