

Periode III-IV

Week	Date	Time	Lecture hall	Contact session	Subject	Teacher	Material	Laboratory
2	10.1.2017	12-14	V3	Lecture 1	Introduction to pyrometallurgical unit processes and process phenomena	AJ	Seetharaman: Vol. 1: Ch.1.1	
	11.1.2017	12-14	V3	Lecture 2	Reactions involving gases and solids Gas-Solid reactions systems - Transport and interfacial phenomena	AJ	Seetharaman: Vol. 3A: Ch.2.4.3	
3	17.1.2017	12-14	V3	Lecture 3	Experimental research techniques (reaction kinetics) - Introduction to laboratory project work	MK		erillinen aika tulosten esittelylle
	18.1.2017	12-14	V3	Lecture 4	Agglomeration, Oxidation, Reduction Gas-solid reactors	AJ		
4	24.1.2017	12-14	V3	Lecture 5	Presentation of Experimental plan	Students		
	25.1.2017	12-14	V3	Lecture 6	Reactions involving liquid phases - metallurgical melts (slag, metal, matte)	AJ	Seetharaman: Vol. 1: Ch.2.1-2.2	
5	31.1.2017	12-14	V3	Lectures 7-8	Gas-Metal-Slag system - transport and interfacial phenomena - reaction rates and rate limiting processes	AJ	Seetharaman: Vol. 2: Ch.1, Ch.2	
	1.2.2017							
6	7.2.2017	12-14	V3	Lecture 9	Experimental research techniques (interfacial phenomena)	MK	Vol. 2: Ch.1	
	8.2.2017	12-14	V3	Lecture 10	Gas-Metal-Slag system - industrial examples/cases	AJ		
7	Exam week							
8	21.2.2017	12-14	V3	Lecture 11	Guest lecture - SSAB Tuomas Antola, Vacuum decassing and industrial practices			Compulsory Reflection essay
	22.2.2017	12-14	V3	Lecture 12	Liquid to Solid system (casting)	AJ		
9	28.2.2017				Presentation of Experimental Results	students		ei luentotunteihin (24h)
	1.3.2017				no lecture			

Teachers

MK Marko Kekkonen
AJ Ari Jokilaakso

Material

Seshadri Seetharaman (ed.): Treatise on Process Metallurgy, Vol. 1, 2 and 3 (selected chapters), Elsevier, 2014
Julian Szekeley, James W. Evans and Hong Yong Sohn: GAS-SOLID REACTIONS (selected chapters), Academic Press, 1976