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	Q&P Q-P-T	2	
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	SMA	2	
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Chapter	Content	hour	Format
Introduction	Brief introduction of solid-state phase transformation and application	2	Classroom Lecture
thermodynamics	Thermodynamics and interfaces	2	Classroom Lecture
	Diffusion and interface	2	Classroom Lecture
Phase transition kinetics	Diffusional transition	2	Classroom Lecture
	Diffusionless transition	2	Classroom Lecture
Crystallography of phase transformation	Crystallographic model of martensitic transformation	2	Classroom Lecture
	Nucleation and microstructure of martensite	2	Classroom Lecture
Microstructure control of high strength steel	Ultrafine ferritic steel	2	Classroom Lecture
	Super nano bainitic steel	2	Classroom Lecture
	Tempering of	2	Classroom

		martensitic high strength steel		Lecture
		Q&P and Q-P-T steel	2	Classroom Lecture
		Nickel saving low temperature steel	2	Classroom Lecture
	Microstructure control and application of high performance metal functional materials	The introduction of high performance alloys includes SMA, high entropy and so on	2	Classroom Lecture
		Introduction of properties and principles of various high performance alloys	2	Classroom Lecture
		Case Study	2	Classroom Lecture
	final exam	final exam	2	exam