

**AZƏRBAYCAN RESPUBLİKASI ELM VƏ TƏHSİL  
NAZİRLİYİ  
BAKİ DÖVLƏT UNİVERSİTETİ**

**BAKALAVRİAT PİLLƏSİ ÜÇÜN**

**İXTİSAS- Fizika**

**FƏNN – Yarımkəçirici materialşünaslıq**

**BAKİ 2024**

## Mövzular üzrə saatların bölgüsü

№	Mövzular	Saatlar		
		Cəmi 75	Müh. 45	Lab. 30
1	Basic Semiconductor Material Science and Solid State Physics		2	
2	Crystal Structure		2	
3	Chemical bond		2	
4	Intrinsic Defects in Semiconductors		2	
5	Phase Diagram,		2	
6	Binary diagrams		2	
7	Experimental Determination of 2-Component Phase Diagrams		2	
8	P-T and P-T-X diagrams . P-T and P-T-X diagrams SiO <sub>2</sub> , P-T and P-T-X diagrams Si P-T and P-T-X diagrams Ge High dissociation pressure Low dissociation pressure		2	
9	Experimental determination of 3-component phase diagrams. Ternary System with a Binary Solid Solution		2	
10	Three component (ternary) eutectic systems. Ternary Systems that Contain a Compound that Melts Congruently		2	
11	Kinetics of nucleation and growth. Nonequilibrium Solidus. Exsolution, Nucleation kinetics,  Fractional Crystallization in the System		2	
12	Crystal Growth . The Czochralski Process Zone Refining		2	
13	Vapor-liquid-solid (VLS) Growth Process Chemical Vapor Deposition Epitaxial		2	
14	Atomic Processes of Diffusion		2	

	Diffusion Mechanisms Defect Charge and Dopant Diffusivity Non-Linear Diffusion Practical Diffusion Processes			
15	Ion Implantation Implant Range and Straggle Implant Damage Practical Ion Implantation Processes Implanted Concentration Profiles and Subsequent Diffusion		2	
	Laboratoriya işləri			
1	Grading of the synthesis furnace			3
2	Grading of single crystal growth furnace by Bridgman method			3
3	Investigation of the surface morphology of the crystal by means of a microscope			3
4	Obtaining and measuring vacuum			3
5	Mechanical processing of crystals			3
6	Obtaining thin layers by chemical deposition method			3
7	Obtaining thin layers by thermal evaporation method			3
8	Production of nanoparticles and thin films by laser ablation method			3
9	Determination of crystal parameters by optical method			3
10	Determination of parameters of thin layers by optical method			3