

3. 電気電子情報工学系 Electrical, Electronics and Computer Engineering Field			EEC-S1
授業科目名 Course Title	固体物理学 Condensed Matter Physics	単位数 Credit	2
担当教員 Instructor	山本 晃司 YAMAMOTO Kohji	開講学期 Semester	春学期 Spring
キーワード Keywords	Crystal structure, x-ray diffraction		

授業概要 Course summary	
結晶格子、逆格子、バンド構造を理解する。 This course deals with crystal lattices, inverse lattices and x-ray diffraction.	
到達目標 Course goal	
To understand crystal properties in solid.	
授業内容 Course description	
<ol style="list-style-type: none"> 1. Unit cell 2. Symmetry operation 3. Oblique and rectangular nets 4. Rhombic and square nets 5. Hexagonal net 6. Triclinic and monoclinic lattices 7. Orthorhombic lattices 8. Tetragonal lattices 9. Hexagonal lattices 10. Bragg diffraction 11. Reciprocal lattice 12. Reciprocal lattice (examples) 13. x-ray diffraction 14. Laue condition 15. Scattering amplitude 	
準備学習（予習・復習）等 Preparation / Review	
Those who take this course must have in-depth understanding mathematic calculations including vector analysis.	
授業形式 Class style	
ゼミナール方式 Seminar	
成績評価の方法・基準 Method of evaluation	
レポート、テスト Report and Examination	

教科書・参考書等 Textbook and material
受講要件・予備知識 Prerequisite
ベクトル解析 (vector analysis)
その他の注意事項 Note