

교수계획표(Syllabus)

담당교수 (instructor)	연도 (year)	학기 (semester)	교과목번호 (course number)	교과목명 (course name)	분반 (section)
진형진	2014	1	PH60505	고체물리학 (II)	

담당교수 메일 또는 연락처 : hjeen@pusan.ac.kr 510-2798

상담가능시간 : Tuesday 13:00 ~ 14:30 (공동연구기기동 614 호) or upon request

1. 교수목표 및 강의개요(Course objectives & Description)

1) 교수목표

Prerequisites of solid state physics (II) are graduate level solid state physics (I) and electrodynamics. Based on basic concepts from solid state physics (I), we will discuss various topics/phenomena, which are critical for the development of modern condensed matter physics.

2) 강의개요

The class consists of two lecture per week (75 min. in each). About six sets of homeworks will be given at the end of each topic. To cover new topics from condensed matter physics, term paper or short presentation will be assigned to each student.

2. 주교재(Required textbook)

Charles Kittel	Introduction to solid state physics - 8 th edition	Wiley	2004. 11
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3. 평가방법(Requirements & Grading)

- Midterm exam : 30 %
- Final exam : 30 %
- Class activities (homeworks and term paper or presentation) : 30 %
- Participation + attendance: 10 %

4. 주별 강의계획 (Schedule)

주 별	강의 및 실험 · 실기내용	과제 및 기타 참고사항
제1주	Ch. 13. Dielectrics and Ferroelectricity	
제2주	Ch. 13. Dielectrics and Ferroelectricity	
제3주	Ch. 14. Diamagnetism and Paramagnetism	
제4주	Ch. 14. Diamagnetism and Paramagnetism	Term paper/presentation topics will be released.
제5주	Ch. 15. Ferromagnetism and Antiferromagnetism	
제6주	Ch. 15. Ferromagnetism and Antiferromagnetism	
제7주	Ch. 16. Superconductivity	Topic/presentation for the term paper should be informed.
제8주	Mid-term	
제9주	Ch. 16. Superconductivity	
제10주	Ch. 19. Surface and Interface Physics	
제11주	Ch. 19. Surface and Interface Physics	
제12주	Semiclassical theory of electrons	Ch. 12 and 13 in A & M
제13주	Semiclassical theory of electrons	Ch. 12 and 13 in A & M
제14주	New concepts in condensed matter physics	Note will be given in class
제15주	New concepts in condensed matter physics	Note will be given in class
제16주	Class overview	Term paper/presentation due <기말시험>

5. 참고문헌 (References)

저 자	저 서 명	출 판 사	발 행 년 도	비 고
Ashcroft & Mermin	Solid State Physics	Brooks/Cole	1976	
Quinn & Yi	Solid State Physics	Springer	2009	