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| |  | | --- | | **2012 학년도 1학기 수업계획서** |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **1. 일반사항** | | | | | | | **교과목명** | 물리전자(영어강의) | **과목번호** | 43847 | **강의시간** | 01(월5 목1,2) | | **개설학과** | 전자재료공학과 | **학점/시수** | 3/3 | **강의실** | 01(공602 공802) |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **2. 담당교수** | | | | | | | | **성명** | 이성수 | **소속** | 신소재공학과 | **연구실** | 자연관 536호 |  | | **연락처** | 999-5704 | **E-MAIL** | ssyi@silla.ac.kr | **상담시간** | 월9, 목8 |  |  |  |  |  |  | | --- | --- | --- | --- | | **3. 수강생 유의사항 및 수업형태** | | | | | **선수과목** | Fundamental Physics | **제한학과** |  | | **수강학과** | Dept of Electronic Materials Engineering | **강의유형** | 강의,토론,발표 | | **활용기자재** | 빔 프로젝터 | **교육자료** | VTR 및 멀티미디어 사용 | | **원어사용** | 영어 | **사용 S/W** | Ms Office(word,excel,powerpoint),한글2002 | | **팀티칭** | 무 | **준비물및기타** |  |  |  |  | | --- | --- | | **4. 수업목표 및 교과목 개요** | | | **수업목표** | Understanding the physical concepts related to the solid state materials. | | **교과목개요** | The solid state physics related phenomena including crystal structure, crystal vibration, electric and magnetic properties will be discussed through this course. |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | **5. 성적평가방법** | | | | | | 출석 | 과제물 | 중간고사 | 기말고사 | 학습태도 | | 10 | 10 | 30 | 40 | 10 |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | **6. 주별계획 및 실험.실습계획** | | | | | | **주별** | **강의내용 및 방법** | **활용기자재** | **과제물** | **비고** | | 1 | Introduction of course Ch. 1 Fundamental particles | Beam Projector |  |  | | 2 | Atoms, Charge of electron Mass of electron, Energy of electron | Beam Projector |  |  | | 3 | Forces and acceleration of electron Velocity of electron | Beam Projector | HW #1, Exercise of Ch.1 | Discussion for Ch. 1 | | 4 | Ch.2 Fundamental of Quantum theory Quamtum of physical quantities | Beam Projector |  |  | | 5 | Ch.2 Wave properties of particles | Beam Projector |  |  | | 6 | Ch.2 Wave diffraction and Reciprocal lattice | Beam Projector | HW #2, Exercise of Ch.2 | Discussion for Ch. 2 | | 7 | Ch.3 Crystal binding and Elastic constants | Beam Projector |  |  | | 8 | Midterm Exam. |  |  |  | | 9 | Ch.3 Crystal binding and Elastic constants | Beam Projector |  |  | | 10 | Ch.3 Crystal binding and Elastic constants | Beam Projector | HW #3, Exercise of Ch.3 | Discussion for Ch. 3 | | 11 | Ch.4 Phonons I. Crystal Vibration | Beam Projector |  |  | | 12 | Ch.4 Phonons I. Crystal Vibration | Beam Projector |  |  | | 13 | Ch.4 Phonons I. Crystal Vibration | Beam Projector | HW #4, Exercise of Ch.4 | Discussion for Ch. 4 | | 14 | Ch.5 Phonons II. Thermal Properties | Beam Projector |  |  | | 15 | Ch.5 Phonons II. Thermal Properties | Beam Projector | HW #5, Exercise of Ch.5 | Discussion for Ch. 5 |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | **7. 교재 및 참고문헌** | | | | | | **구분** | **교재명** | **저자명** | **출판사** | **발행일자** | | 교재 | Advanced Semiconductor Engineering | 류장렬 | 형설출판사 | 2010.09 | | 참고 | Solid state electronic devices | Ben Streetman, Sanjay Kumar Banerjee | 호을 Science | 2006.02 | |