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| **2012 학년도 1학기 수업계획서** |

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| **1. 일반사항** |
| **교과목명** | 물리전자(영어강의) | **과목번호** | 43847 | **강의시간** | 01(월5 목1,2) |
| **개설학과** | 전자재료공학과 | **학점/시수** | 3/3 | **강의실** | 01(공602 공802) |

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| **2. 담당교수** |
| **성명** | 이성수 | **소속** | 신소재공학과 | **연구실** | 자연관 536호 |  |
| **연락처** | 999-5704 | **E-MAIL** | ssyi@silla.ac.kr | **상담시간** | 월9, 목8 |  |

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| **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** |   |

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| **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. |

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| **5. 성적평가방법** |
| 출석 | 과제물 | 중간고사 | 기말고사 | 학습태도 |
| 10 | 10 | 30 | 40 | 10 |

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| **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 |

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| **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 |

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