



## Syllabus (2019-Fall semester)

교과목명 Course Title	Quantum Mechanics II	학수번호 Course No.	G12133
개설전공 Department /Major	물리학과	학점 Credit	3
수업시간/강의실 Class Time/ Class room	Thursday 4,5 class hour		
담당교원 Instructor	성명:안창림 Name	소속:물리학과 Department	
	E-mail: tejeho@gmail.com Homepage: everest.ewha.ac.kr	연락처:3277-2387 Telephone	
면담시간/장소 Office Hours/ Office Location	화 4, 목 5교시 / 종과A 524호		

## I. Course Overview

## 1. Course Description

양자역학은 대학원 물리학 과정의 가장 핵심적 교과목이다. 20세기 현대물리학 발전에 중추적 역할을 담당해온 양자역학은 고체, 핵 물리학은 물론 입자물리학에 이르는 최첨단 물리학을 연구하는데 기초적인 패러다임을 제공한다. 이 과목을 이수함으로써 고전적 사고에서 벗어난 양자적 사고를 습득함은 물론 벡터공간, 행렬연산, 편미분방정식 등 수학적 방법론을 학습하여 원자등 미시계에 응용하는 공부를 하게 된다. 이 과목을 성공적으로 이수하기 위해서는 고전역학, 전자기학, 수리물리학 등 물리학과에서 제공하는 표준적인 커리큘럼 내용을 이수해야 한다.

## 2. Prerequisites

Graduate Quantum Mechanics I

## 3. Course Format

Lecture	Discussion/Presentation	Experiment/Practicum	Field Study	Other
100%	%	%		%

(Instructor can change to match the actual format of the class.)

Explanation of course format:



#### 4. Course Objectives

Approximate methods for applying Quantum Mechanics to Various physical problems

#### 5. Evaluation System

Midterm Exam	Final Exam	Quizzes	Presentation	Projects	Assignments	Participation	Other
45%	45%	%	%	%	8%	2%	%

(Instructor can change to match the actual format of the class.)

\* Evaluation of group projects may include peer evaluations.

Explanation of evaluation system:

### II. Course Materials and Additional Readings

#### 1. Required Materials

J. J. Sakurai, Modern Quantum Mechanics

#### 2. Supplementary Materials

#### 3. Optional Additional Readings

### III. Course Policies

\* For laboratory courses, all students are required to complete lab safety training.



## IV. Course Schedule (15 credit hours must be completed.)

Week	Date	Topics & Class Materials, Assignments
Week 1	(09/05)	Chap 5. Approximation Methods
Week 2	(09/12)	Chap 5. Approximation Methods
Week 3	(09/19)	Chap 5. Approximation Methods
Week 4	(09/26)	Chap 5. Approximation Methods
Week 5	(10/03)	Chap 5. Approximation Methods
Week 6	(10/10)	Chap 6. Scattering Theory
Week 7	(10/17)	Chap 6. Scattering Theory
Week 8	(10/24)	Mid Term Exam
Week 9	(10/31)	Chap 6. Scattering Theory
Week 10	(11/07)	Chap 6. Scattering Theory
Week 11	(11/14)	Chap 7. Identical Particles
Week 12	(11/21)	Chap 7. Identical Particles
Week 13	(11/28)	Chap 8. Relativistic Quantum Mechanics
Week 14	(12/05)	Chap 8. Relativistic Quantum Mechanics
Week 15	(12/12)	Chap 8. Relativistic Quantum Mechanics
	(12/19)	Final Term Exam
Makeup Class	(mm/dd)	



### V. Special Accommodations

\* According to the University regulation section #57-3, students with disabilities can request for special accommodations related to attendance, lectures, assignments, or tests by contacting the course professor at the beginning of semester. Based on the nature of the students' request, students can receive support for such accommodations from the course professor or from the Support Center for Students with Disabilities (SCSD). Please refer to the below examples of the types of support available in the lectures, assignments, and evaluations.

Lecture	Assignments	Evaluation
<ul style="list-style-type: none"> <li>. Visual impairment : braille, enlarged reading materials</li> <li>. Hearing impairment : note-taking assistant</li> <li>. Physical impairment : access to classroom note-taking assistant</li> </ul>	Extra days for submission, alternative assignments	<ul style="list-style-type: none"> <li>. Visual impairment : braille examination paper, examination with voice support, longer examination hours, note-taking assistant</li> <li>. Hearing impairment : written examination instead of oral</li> <li>. Physical impairment : longer examination hours, note-taking assistant</li> </ul>

- Actual support may vary depending on the course.

\* The contents of this syllabus are not final—they may be updated.