

Syllabus

科目名[英文名]	物性物理学[Solid State Physics]		
担当教員[ローマ字表記]	新井 豊子[ARAI, Toyoko], 松本 宏一[MATSUMOTO, Koichi], 佐藤 政行[SATO, Masayuki], 金子 浩[KANEKO, Hiroshi]		
科目ナンバー	PHYS3710A	科目ナンバリングとは	
時間割番号	31039	科目区分	----
講義形態	講義	開講学域等	理工学域
適正人数	----	開講学期	Q1,Q2
曜日・時限	月2	単位数	2単位
対象学生	----		
キーワード	REMOTE LEARNING Solid State Physics, condensed matter		
講義室情報	自然科学5号館B 第5講義室		
開放科目	----		
備考	----		

授業の主題

Understanding of more important phenomena based on the fundamental phenomena learned in 'Introduction to Solid State Physics'.

授業目標

This course will provide you with the opportunity to learn about more important phenomena based on the phenomena learned in 'Introduction to Solid State Physics'.

学生の学修目標

Students will study and deepen their understanding of important phenomena in solid state physics.

授業概要

Starting with simple review of fundamental phenomena learned in 'Introduction to solid state physics' important phenomena as follows are discussed:

*Course contents may change.

1 ~ 4 . Electronic band structure in solids · role of electrons and holes in electric conduction of semiconductors

5 ~ 8 . Phenomena given by interaction among photons, electrons and phonons in crystals

9 ~ 11 . Phenomenological understanding of superconductivity and BCS theory

12 ~ 15 . Exchange interaction and ferromagnetism · antiferromagnetism

This course is mainly lecture and include exercise with discussion.

Students are requested to give home learning for time corresponds to 90 min × 15 times to review the lecture and reference materials, and to make reports.

English is the second language in this lecture. English is used in 25-50 % of this lecture.

評価方法と割合

評価方法

Report

Attendance and presentation

評価の割合

Attendance to at least two-thirds of classes is required.

Report 80

Attendance and presentation 20

授業時間外の学修に関する指示

復習に関する指示

Students are required to do homework for review.

教科書・参考書

特になし

オフィスアワー等(学生からの質問への対応方法等)

Question at the lecture is strongly recommended. Rooms of the lectures are as follows:

Arai, Room 425, Building No. 5

Kaneko, Room 127, Building No. 5

Matsumoto, Room 438, Building No. 5

Sato, Room 440, Building No. 5

履修条件

特になし

■ 特記事項

特になし