

## ◆ Department of Physics (Condensed Matter Physics)

### 1. Graduation Requirements (修了要件)

#### 【Master's degree】

A candidate must fulfill the following requirements.

- (1) 30 credits or more from the Graduate School Courses. (大学院授業科目)
- (2) Additional requirements set by the department
  - Research Courses (研究科目群)
    - 4 credits from the Seminar Courses. (講究科目)
    - 9 credits from the Graduate Research Courses. (研究関連科目)
  - Courses by Departments (専門科目群)
    - 9 credits or more from the Departmental Courses. (専攻専門科目)
  - 2 credits or more from the Liberal Arts and General Education. (大学院教養・共通科目群)
- (3) The candidate must pass master's-thesis examination and the final examination.

#### 【Doctoral degree】

A doctoral candidate must fulfill the following requirements.

- (1) Seminars in Physics designated for each semester.
- (2) The candidate must complete and upload a thesis for the degree, and pass the final examination (including English proficiency) for the degree. The candidate is advised to consult with his/her supervisor for the policy of awarding the degree.

### 2. Tables of Course Subjects

#### Research Courses (研究科目群)

Course Number	Category Remarks* (See footnotes )	Subject	Credit	Semester S: Spring A: Autumn	Remarks
<b>Seminar Courses (講究科目)</b>					
17701	R	Seminars in Physics I	0-1-0	S	MC(1)
17702	R	Seminars in Physics II	0-1-0	A	MC(1)
17703	R	Seminars in Physics III	0-1-0	S	MC(2)
17704	R	Seminars in Physics IV	0-1-0	A	MC(2)
17801	R	Seminars in Physics V	0-2-0	S	DC(1)
17802	R	Seminars in Physics VI	0-2-0	A	DC(1)
17803	R	Seminars in Physics VII	0-2-0	S	DC(2)
17804	R	Seminars in Physics VIII	0-2-0	A	DC(2)
17805	R	Seminars in Physics IX	0-2-0	S	DC(3)
17806	R	Seminars in Physics X	0-2-0	A	DC(3)
<b>Graduate Research Courses. (研究関連科目)</b>					
17601	R	Colloquium in Condensed Matter Physics	0-1-0	A	MC(1)
17751	R(T)	Exercise in Condensed Matter Physics and Statistical Mechanics I	0-2-0	S	MC(1)
17752	R(T)	Exercise in Condensed Matter Physics and Statistical Mechanics II	0-2-0	A	MC(1)

17753	R(T)	Exercise in Condensed Matter Physics and Statistical Mechanics III	0-2-0	S	MC(2)
17754	R(T)	Exercise in Condensed Matter Physics and Statistical Mechanics IV	0-2-0	A	MC(2)
17761	R(E)	Laboratory Works in Material Physics I	0-0-2	S	MC(1)
17762	R(E)	Laboratory Works in Material Physics II	0-0-2	A	MC(1)
17763	R(E)	Laboratory Works in Material Physics III	0-0-2	S	MC(2)
17764	R(E)	Laboratory Works in Material Physics IV	0-0-2	A	MC(2)
<b>Departmental Courses (專攻専門科目)</b>					
17034 17043 17044	R(G)	Colloquium in Quantum Physics and Nanoscience I-III	0-1-0	A	DC
17033 17046	R(G)	Overseas Visiting Research in Quantum Physics and Nanoscience I,II	0-1-0	AS	DC

\*R: Required, R(T): Required (Theoretical), R(E): Required (Experimental),

R(G): Required (Global COE Course)

**Courses by Departments (専門科目群)**

Course Number	Category Remarks* (See footnotes)	Subject	Credit	Semester S: Spring A:Autumn	Remarks
<b>Departmental Courses (專攻専門科目)</b>					
17025		Quantum Mechanics of Many-body Systems	2-0-0	S	
17002		Advanced Statistical Physics	2-0-0	A	
17003		Electron Theory of Solids	2-0-0	A	
17004		Crystal Physics	2-0-0	A	
17006		Low Temperature Physics	2-0-0	S	
17026		Light and Matter I	1-0-0	S	
17027		Light and Matter II	1-0-0	S	
17058		Light and Matter III	1-0-0	A	
17011		Physics of Magnetic Materials	1-0-0	A	
17012		Physics of Soft Matters	1-0-0	A	
17501- 17512		Special Topics in Solid State Physics I- XII	1-0-0	SA	
17013- 17018		Recent Progress in Condensed Matter Physics I- VI	1-0-0	SA	
<b>Courses in Other Departments</b>					
16651		Physics Fundamental Experiments I	0-0-1	S	
16001		Quantum Information	2-0-0	A	

**Liberal Arts and General Education (大学院教養・共通科目群)**

				Remarks
<b>International Communication (大学院国際コミュニケーション科目)</b>				
<b>Courses for International Students (大学院留学生科目)</b>				
<b>Designated by the Department (専攻指定)</b>				
16029-	Practical Exercises in International Researches I-XI	0-1-0		
16030-	Practical Exercises in Organizing International			
	Conferences I-XI	0-1-0		
17020-17023	Science in English (Condensed Matter Physics) I-IV	1-0-0		
16023-16073	Science in English (Fundamental Physics) I-IX	1-0-0		
17019	Academic Writing in Physics	2-0-0	S	
16022	Academic Presentation in Physics	2-0-0	A	
17045	Academic Writing in Quantum Physics and Nanoscience	2-0-0	S	
16039	Academic Presentation in Quantum Physics and Nanoscience	2-0-0	A	
17033, 17046	Overseas Visiting Research in Quantum Physics and			
	Nanoscience I,II	0-1-0	AS	