

## "Nonlinear Dynamics & Biophysics" guidelines of the standard curriculum

2021~

### <integrated master-doctoral degree program>

Semester	Course	Credit	
1	CLASSICAL MECHANICS	3	Required(Major common)
	CLASSICAL ELECTROMAGNETIC THEORY I	3	Required(Major common)
	QUANTUM MECHANICS I	3	Required(Major common)
2	CLASSICAL ELECTROMAGNETIC THEORY II	3	Required(Major common)
	BIOPHYSICS I	3	Required(Major)
	QUANTUM MECHANICS II	3	Required(Major common)
3	Special Topics below	3	Major(Choose 1)
	SPECIAL TOPICS IN ADVANCED PHYSICS I(Seminar)	3	Major(Choose 1)
	BIOPHYSICS II	3	Major(Choose 1)
4	Special Topics below	3	Major(Choose 1)
	SPECIAL TOPICS IN ADVANCED PHYSICS II(Seminar)	3	Major(Choose 1)
	EXPERIMENTAL PHYSICS	3	Required(Major common)
5	Special Topics below	3	Major(Choose 1)
	Special Topics below	3	Major(Choose 1)
6	WRITING PHYSICS PAPERS	3	Required(Major common)
	Special Topics below	3	Major(Choose 1)
Total Credits		48	

\*Students for the integrated program are required to complete 48 credits in total.

\*Insufficient credits can be freely taken according to your choice.

\*Special Topics below

PHY641 STATISTICAL PHYSICS I

PHY651 NONLINEAR DYNAMICS AND CHAOS I

PHY652 NONLINEAR DYNAMICS AND CHAOS II

PHY747 SPECIAL TOPICS IN BIO AND STATISTICAL PHYSICS I

PHY748 SPECIAL TOPICS IN BIO AND STATISTICAL PHYSICS II

PHY761 Special Topics in Biophysics I

PHY762 Special Topics in Biophysics II

PHY763 SPECIAL TOPICS ON MOLECULAR BIOPHYSICS I

PHY764 SPECIAL TOPICS ON MOLECULAR BIOPHYSICS II

PHY862 BIOIMAGING I

### <master's degree>

Semester	Course	Credit	
1	CLASSICAL MECHANICS	3	Required(Major common)
	CLASSICAL ELECTROMAGNETIC THEORY I	3	Required(Major common)
	QUANTUM MECHANICS I	3	Required(Major common)
2	BIOPHYSICS I	3	Required(Major)
	EXPERIMENTAL PHYSICS	3	Required(Major common)
3	SPECIAL TOPICS IN ADVANCED PHYSICS I(Seminar)	3	Major(Choose 1)
	BIOPHYSICS II	3	Major(Choose 1)
4	WRITING PHYSICS PAPERS	3	Required(Major common)
Total Credits		24	

\*Students for the master's degree are required to complete 24 credits in total.

### <doctoral degree>

Semester	Course	Credit	
1	SPECIAL TOPICS IN ADVANCED PHYSICS I(Seminar)	3	Major(Choose 1)
	Special Topics below	3	Major(Choose 1)
	Special Topics below	3	Major(Choose 1)
2	CLASSICAL ELECTROMAGNETIC THEORY II	3	Required(Major common)
	QUANTUM MECHANICS II	3	Required(Major common)
	SPECIAL TOPICS IN ADVANCED PHYSICS II(Seminar)	3	Major(Choose 1)
	Special Topics below	3	Major(Choose 1)
3	Special Topics below	3	Major(Choose 1)
	Special Topics below	3	Major(Choose 1)
4	Special Topics below	3	Major(Choose 1)
Total Credits		30	

\*Students for the doctoral degree are required to complete 30 credits in total.

\*Insufficient credits can be freely taken according to your choice.

\*Special Topics below

PHY641 STATISTICAL PHYSICS I

PHY651 NONLINEAR DYNAMICS AND CHAOS I

PHY652 NONLINEAR DYNAMICS AND CHAOS II

PHY747 SPECIAL TOPICS IN BIO AND STATISTICAL PHYSICS I

PHY748 SPECIAL TOPICS IN BIO AND STATISTICAL PHYSICS II

PHY761 Special Topics in Biophysics I

PHY762 Special Topics in Biophysics II

PHY763 SPECIAL TOPICS ON MOLECULAR BIOPHYSICS I

PHY764 SPECIAL TOPICS ON MOLECULAR BIOPHYSICS II

PHY862 BIOIMAGING I