Department of Polar Science Course Registration Model
(5-year Integrated Doctoral Program)

Fields of education and research guidance : Polar space and upper atmospheic Sciences
Research topics : Aurora particle acceleration based on aurora observation

Year	Comprehensive subjects	Credits	School common foundation subjects	Credits	Introductory subjects group	Credits	Specialization subjects group	Credits	Research guidance subjects group	Credits	Fieldwork
1	Student seminars	1	Introduction to Advanced Earth Science I	2	Introduction of upper atmosphere physics	2	Measurement of the upper atmosphere with electromagnetic waves	2	Special Lectures for Dissertation I	2	
	SOKENDAI lectures	1	Introduction to Advanced Earth Science II	2			Auroral Physics	2	Special Exercise for Dissertation I	2	
			Introduction to Earth observation Metrology	2			Magnetospheric Physics	2			
	<Goals> As you broadly study multidisciplinary sciences and polar science, set up a general framework for the research theme and the research plan of your doctoral thesis. At the student presentation sessions in February, explain your research findings to date and present your plan for further research work. This presentation is reviewed by supervisors, as well as by the entire body of academic staff in the department.										
2			Measurement of space and atmosphere	2			Polar Plasma Wave Theory	2	Special Lectures for Dissertation II	2	Participate in observation of geomagnetically conjugate points of auroras in Iceland at the time of the autumnal equinox and check the performance of observation equipment.
									Special Exercise for Dissertation II	2	
	<Goals> Narrow down the themes of your doctoral thesis and decide on a research plan on the observation-based research in the polar regions. Create a prototype of an observation device in the first semester, and check its performance in the second semester during fieldwork in the Arctic region. Furthermore, write an interim report including all the findings of your research since enrolment. Complete this before the end of the academic year and have it assessed by the academic staff in the research group. At the student presentation sessions in February, explain your research findings to date and present your plan for further research work. This presentation is reviewed by supervisors, as well as by the entire body of academic staff in the department.										
3									Special Lectures for Dissertation III	2	Join the summer party of the Japanese Antarctic Research Expedition in the second semester to install the aurora observation equipment.
									Special Exercise for Dissertation III	2	
	<Goals> Apply for participation in the summer party of the Japanese Antarctic Research Expedition. Complete the observation equipment in the first semester and then install it at the Showa Station in the second semester and commence observation. At the student presentation sessions in February, explain your research findings to date and present your plan for further research work. This presentation is reviewed by supervisors, as well as by the entire body of academic staff in the department.										
4									Special Lectures for Dissertation IV	2	
									Special Exercise for Dissertation IV	2	
	<Goals> In the first semester, start writing a thesis manuscript by putting together information on the observation equipment and your initial observation results. Also in the first semester, finish collecting all the data necessary for the doctoral thesis and proceed with analyzing the data. In the second semester, start writing the thesis. In addition, prepare a paper by compiling information on the observation equipment and initial observation results, and submit it to a peer-reviewed journal. At the student presentation sessions in February, explain your research findings to date. This presentation is reviewed by supervisors, as well as by the entire body of academic staff in the department.										
5									Special Lectures for Dissertation V	2	Conduct sampling of microorganism communities in snowy valleys in the high mountains of Japan in summer.
									Special Exercise for Dissertation V	2	
	<Goals> Proceed with writing the doctoral thesis. The thesis should be 80% complete (at the standard of a doctoral thesis) by the preliminary assessment stage. After the preliminary assessment, be sure to address all the issues raised by the preliminary assessment committee before applying for the final assessment. Then work to complete the thesis.										
No. of credits		2 (1)		8 (2)		2 (3)		8 (4)		20 (5)	

Obtained credits	40
Credits needed for degree	40

(Note that 8 credits from category 2 must be included. Up to 2 credits from category 1 can be counted towards the degree. In addition, credits earned from other universities can also be counted towards the degree, in accordance with the credit exchange system, subject to specified limits.)