

Course Category	TBA	Credits	2
Subject Code	TBA	Taking Year	1 st Grade, 2 nd Grade
Course Title (Japanese)	無限次元位相幾何学	Course Period	2 nd Semester
Course Title	Infinite Dimensional Topology	Day of the week / Hour	Friday / The second period
Registration Code	TBA	Compulsory / Elective	Elective
Instructor(s)	Eiichi Matsuhashi	Course Qualification	Students of Postgraduate Mathematics Course

Course Style	Lecture
Course Aim	The aim of this class is to understand basic infinite dimensional topology. Also, we learn various classical results of this area.
Goals and Objectives (Level of Achievement)	Understand how the theory of general topology is used to prove various results of infinite dimensional topology.
Course Plan	<ol style="list-style-type: none"> 1. Linear spaces 2. Extending of continuous functions 3. The Borsuk homotopy extension theorem 4. Bing's shrinking criterion 5. The inductive convergence criterion 6. Homogeneity of Hilbert cube 7. The cone over Hilbert cube 8. Isotopies 9. Homogeneous zero-dimensional spaces 10. Inverse limits 11. Hyperspaces 12. The covering dimension 13. Higher dimensional hereditarily indecomposable continua 14. Totally disconnected spaces 15. The dimension of kernel of a space 16. Colorings of maps
Teaching Methods	Problems for reports will be given in the class.
Key Words	Dimension, continuum, Hilbert cube
Texts	To be introduced in the class
Reference Books	J. van Mill: The infinite dimensional topology of function spaces, 2002.
Other Teaching Materials	Further references and materials will be given in class.
Performance Evaluation	Grading is based on reports and class attendance.
Notes on the Course	None
Office Hour	To be announced
Other Notes	None