Course Category	TBA	Credits	2
Subject Code	TBA	Taking Year	1st Grade, 2nd Grade
Course Title (Japanese)	ガロアコホモロジー	Course Period	2nd Semester
Course Title	Galois Cohomology	Day of the week / Hour	Thursday / The second period
Registration Code	TBA	Compulsory / Elective	Elective
Instructor(s)	Miho Aoki	Course Qualification	Students of Postgraduate Mathematics Course

Course Style	Lecture
Course Aim	I talk about an introduction to cohomology of number fields. First, we start with a review of Galois theory and algebraic number theory. After that, we introduce Galois cohomology. We show basic theorems on Galois cohomology and give some examples.
Goals and Objectives (Level of Achievement)	To understand theory of algebraic number theory and homological algebra
Course Plan	1, 2. Review of Galois theory 3, 4. Preparation from algebraic number theory 5, 6. Galois cohomology 7, 8. Basic theorems on Galois cohomology (The Hochschild-Serre spectral sequence, Duality, Hilbert's Satz 90) 9, 10. The Brauer Group 13 -15. Cohomology of global fields
Teaching Methods	Students are required to submit reports.
Key Words	Galois theory, Galois Cohomology, Brauer Group, Algebraic Number Fields
Texts	[1] J. P. Serre, Galois Cohomology, Springer. [2] J. Neukirich, A. Schmidt and K. Wingberg, Cohomology of number fields, Springer.
Reference Books	K. Kato, N. Kurokawa and T. Saito, Number Theory 1, Transactions of Mathematical Monographs, AMS.
Other Teaching Materials	None
Performance Evaluation	Grades will be based on reports.
Notes on the Course	None
Office Hour	To be announced
Other Notes	None