

専攻名	理学系研究科天文学専攻
科目番号	35604-1015
科目名	理論天文学特別講義V (Theoretical Astronomy, Advanced Course V)

* 大学院科目は、各項目について和文に続けて英文も入力してください。
 なお、英文のみ入力していただいても結構です。

講義題目 (Course Title)	Particle Cosmology and Modern Gravity
授業の目標・概要 ※必須 (Course Objectives/Overview)	This is a series of lectures in graduate level course presenting an introduction to the standard model of cosmology and also different perspective of modern gravitation theories on cosmology. Students will get conceptual knowledge on various ingredients of contemporary cosmology. Interplay between astrophysics, particle physics, theories of gravitation and cosmology will be
授業のキーワード (Keywords)	日本語 英語 cosmology, particle physics, gravity
授業計画 (Schedule)	In this series of lectures we will cover the following subjects. The subjects and schedule shown here might change, depending on the progress of each lecture. 1) Basics of general relativity, cosmology and particle physics 2) Dark matter 3) Dark energy 4) Thermodynamics in the early universe 5) Density perturbations and cosmic structure
授業の方法 ※必須 (Teaching Methods)	Lectures will be done using mainly blackboard, supplemented by slide presentations with handouts provided
成績評価方法 ※必須 (Method of Evaluation)	Evaluations will be made based upon the report publications, questions & answers and positive action made by the students during the lectures
教科書 (Required Textbook)	
参考書 (Reference Books)	1) Gravitation and Cosmology, Weinberg, WSE (2008). 2) Introduction to Particle Cosmology Bambi & Dolgov Springer (2015)
履修上の注意 (Notes on Taking the Course)	We expect that the students have already mastered classical mechanics, electro
関連ホームページ (Course-Related Websites)	
その他 (Others)	
メールアドレス (E-mail Address)	
研究室電話番号 (Laboratory room phone no.)	0422 34 3740 (Kajino Labo., NAJ Miataka/University of Tokyo)
授業使用言語 ※必須	英語

天文学専攻では留学生に対応するため、英語での講義を基本としております。