

Syllabus Reference

Course title	Astrophysics I		
Term	後期 2nd Half		
Credit(s)	2		
The main day		The main period	
School/Program	School of Physical Sciences		
Department/Program	Department of Astronomical Science		
Category	Common Base		
Lecturers	Nozomu Tominaga		

Instructor

Full name

* TOMINAGA NOZOMU

Outline	The nature of astronomical objects is revealed with Physics. In this lecture, I will introduce various astronomical objects and describe physics related to astronomy. In particular, stellar structure, stellar evolution, and supernova explosions are reviewed. Outlooks are also outlined.
Goal	Aims of this lectures are - understanding of basic physics, for example, gravity, radiative transfer, nuclear reaction - using basic physics to understand astronomical objects - understanding stellar evolution and supernova explosions
Grading system	
	Grading system
Grading system	01:Four-grade evaluation (A, B, C, D)
Grading policy	Final report 100%
Lecture Plan	<ol style="list-style-type: none"> 1. Introduction to astrophysics 2. Physics required for astrophysics 3. Stellar structure 4. Radiative transfer - 1 5. Radiative transfer - 2 6. Nuclear reaction - 1 7. Nuclear reaction - 2 8. Stellar evolution 9. Supernova explosion 10. Explosive nucleosynthesis 11. Supernova light curve 12. Transients 13. Chemical evolution 14. Outlooks - 1 15. Outlooks - 2
Location	Mitaka Detail will be informed later
Language	English, Japanese
Textbooks and references	Textbook: None References: Principles of stellar evolution and nucleosynthesis (Clayton) Supernovae and nucleosynthesis (Arnett) Radiative processes in astrophysics (Rybicki and Lightman) Foundations of radiation hydrodynamics (Mihalas and Mihalas) Stellar structure and evolution (Kippenhahn and Weigert)

