

226706 STELLAR ASTROPHYSICS 2

(ฟิสิกส์ดาราศาสตร์ดาวฤกษ์ 2)

Number of Credits: 3

Course Description :

Stellar pulsation, stellar remnants and binary star systems.

Course Objective :

Students will be able to describe and discuss stellar pulsation, variable stars, stellar remnants, binary star systems, stellar mass determination and mass transfer in close binary star systems.

Course Contents	No. of Lecture Hours
1. Stellar pulsation	7.5
1.1 Observations of pulsating stars	
1.2 Period–luminosity relation	
1.3 Stellar pulsation model	
1.4 Variable stars	
2. Stellar remnants	
2.1 White dwarfs	2.5
2.2 The Chandrasekhar limit	2.5
2.3 The cooling of white dwarfs	2.5
2.4 Neutron stars	2
2.5 Pulsars	2
2.6 Black holes	2
3. Binary star systems	
3.1 Classification of binary stars	4
3.2 Stellar mass determination	4
3.3 Eclipsing, spectroscopic binaries	4
3.4 Light curve and model of binary star systems	4
3.5 Gravity in close binary star systems	4
3.6 Mass transfer in close binary star systems	4
Total	45