

Syllabus Spring 2020

Introduction to Modern Cosmology

Course description. Introduction to key concepts of modern cosmology, based on the expanding Universe and its content in matter and energy seen and unseen, arising from past and current spectroscopic and photometric observations.

Professor: Maurice H.P.M. van Putten

Coordinates: 8B02, MO and WE (online)

References: Lecture notes are provided on www.mvputten.org.

Contents are build around basic elements of

- I. Introduction**
- II. Expanding Universe**
- III. Distances and ages**
- IV. Compact objects**
- V. Stellar systems**
- VI. Matter seen and unseen**
- VII. The problem of dark matter**
- VIII. The problem of dark energy**
- IX. What is cosmological spacetime?**

Homework. Provided in class

Grading. Based on class attendance, homework, mid-term, final.