

# Cosmic Origins

Lecture course Minor Astronomy  
University Groningen  
November 2015 - January 2016

# Practical Matters

Agenda: thursday 19:00-21:00  
Harmoniegebouw 1312.0018  
(Oude Kijk in 't Jatstraat 26)

Nov. 19, Jan. 14:  
Infoversum  
Vrydemalaan 2, 9713 WS Groningen

Lecturer: Rien van de Weygaert  
  
Kapteyn Astronomical Institute  
Kapteynborg, Zernike campus, rm. 186;  
tel. 050-3634086;  
[weygaert@astro.rug.nl](mailto:weygaert@astro.rug.nl)

Website: [www.astro.rug.nl/~weygaert/cosmic\\_origins2015.html](http://www.astro.rug.nl/~weygaert/cosmic_origins2015.html)

# Exam

- |   |     |
|---|-----|
| 1. Written exam (Jan. 20, 2016)           | 75% |
| 2. Report on specific topic (10-15 pages) | 25% |

Deadline report: Mar. 1, 2016

# Topics/Agenda I.

- Lecture 1, November 12

Introduction

Cosmology, the Search for the Origin of our World  
the Fundamental Questions of our Existence

- Lecture 2, November 19

the Changing Sky: Invoersum Tour of the Heavens  
Heavenly Rhythms: from Awe to Calendar

- Lecture 3, November 26 ? (note: due to workvisit lecturer to Valencia, we need to find another slot)

Gods and Myths:  
Genesis of our World

- Lecture 4, December 3

the Cosmos Mechanized:  
from Babylonians and Greeks to the Scientific Revolution

# Topics/Agenda II.

- Lecture 5, December 10

Kant to Hubble:  
from Island Universes to Cosmic Expansion

- Lecture 6, December 17

the Dynamical Universe  
Einstein, Gravity and the Dynamics of our Universe

- Lecture 7, January 7

the Big Bang:  
the Birth of our Universe

- Lecture 8a, January ?

Cosmic Web, Galaxies and Stars:  
the emergence of structure in the Universe

- Lecture 8b, January 14

the Cosmic Web: Infoversum Tour of the Universe

# Literature

- Lecture Notes (ppt slides etc.)
- Cosmos,  
an illustrated history of astronomy and cosmology  
John North, 2<sup>nd</sup> ed., 2008, Univ. Chicago Press (paperback)
- Cosmology, the Science of the Universe  
E. Harrison, 2<sup>nd</sup> ed., 2000, Cambridge Univ. Press
- Conceptions of Cosmos:  
From Myths to the Accelerating Universe: A History of Cosmology  
H. Kragh, 2013, Oxford Univ. Press
- the History and Practice of Ancient Astronomy  
J. Evans, 1998, Oxford Univ. Press
- Ancient Cosmologies  
ed. C. Blacker, M. Loewe, 1975, George Allen & Unwin Ltd.