

Nastro: Northumberland Astronomical Society



Introduction to Astronomy (2011 Course)

This course is written and delivered by Nastro's Education Officer Dr Adrian Jannetta, Fellow of the Royal Astronomical Society. It will take place in the Beehive Function room at The Trap Inn, North Broomhill. This is an informal course with no tests or exams at the end and is designed to help you learn about astronomy at a comfortable pace in a relaxed environment. There will be some practical activities available to do in each session.

Each session will start at 7.30pm on the dates as listed below and each will last approximately 1 hour.

The course costs £3 per person, per session or is it free to Nastro members. Children are welcome.

Week 1 (Thursday February 10th) — Practical Astronomy

Covering: Using telescope and binoculars for astronomy, reading star charts and using Stellarium (Free PC software).

Week 2 (Thursday March 10th) — The Earth-Moon system

Covering: Lunar observing, phases of the moon, eclipses, tides, the mystery of transient lunar phenomena and using Virtual Moon Atlas (Free PC software).

Week 3 (Thursday April 14th) — The Planets

Covering: A history of solar system exploration, components of the solar system, motion of the planets across the sky, observing the planets with binoculars and telescopes, using Celestia (Free PC soft-ware) and constellations of the spring night sky.

Week 4 (Thursday May 12th) — Minor Planets, Comets and Meteor Showers

Covering: Recording meteor observations, the Kuiper-Belt and the Oort Cloud and observing the asteroids.

Week 5 (Thursday June 9th) — Space Weather

Covering: The Sun-Earth environment, the sunspot cycle and the aurora, noctilucent clouds and more.

Week 6 (Thursday July 14th) — The Sun and Other Stars

Covering: Life cycle of the Sun and other stars, nebulas and star clusters, structure of the Milky Way galaxy, analysing starlight - introduction to amateur spectroscopy, double stars and variable stars, methods of safely observing the Sun.

Week 7 (Thursday August 11th) — Extra-Solar Planets and SETI

Covering: The search for planets around other stars, the Search for Extra Terrestrial Intelligence and constellations of the summer night sky.

Week 8 (Thursday September 8th) — Deepsky Astronomy

Covering: Observational astronomy, star-hopping to invisible objects, finding the Andromeda Galaxy and other gems of the summer sky.

Week 9 (Thursday October 13th) — Cosmology Part 1

Covering: The cosmic distance ladder (how astronomers measure distances), the large scale structure of the expanding universe, Newton and Einstein's descriptions of gravity, black holes, and constellations of the autumn night sky.

Week 10 (Thursday November 10th) — Cosmology Part 2

Covering: Olber's paradox - why is the sky dark at night? Evidence for an expanding universe, The Big Bang theory, Dark matter and missing mass, Inflation theory. The accelerating expansion and dark energy, High energy physics at the Large Hadron Collider, String Theory. What happened before the Big Bang? Are there other universes?

For more information on the course content email: Adrian@themoon.co.uk, for other queries email: Emma@nastro.org.uk

Nastro Registration Form



Please print your details using block capitals.

Title:

Name:

Address:

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..... Post Code:

E-mail address:

Telephone Number(s):

The Society agrees to:

1. Arrange monthly meetings over 10 months each year.
2. Allow the use of all society equipment free of charge.
4. Provide hall fees from membership fees.
5. Affiliation to the Federation of Astronomical Societies, with the use of their insurers.

The Society requests that members sign below to agree to abide to the Society's constitution and behave in accordance with the requirements of the committee and other members.

(Tick membership option)

- Junior members (under 18) £10**
- Full Member £20**
- Family membership (2 Adults + children) £30**
- Senior citizen/unwaged £10**
- Family membership unwaged £15**

ACCEPTANCE

I, the undersigned, having read the constitution of the Northumberland Astronomical Society, agree to be bound by the rules contained therein.

Signed.....Date.....

Please fill in and hand to the treasurer Bob Scott with the correct fee