BALLARAT MUNICIPAL
OBSERVATORY & MUSEUM

Introduction to Astronomy - March/April 2016

(Ballarat Observatory)

Date	Session 1 Topics 5:30 - 6:15 pm	Break 30mins	Session 2 Topics 6:45 - 7:30pm
Day 1 Saturday 26th March 2016	**Basics 1:** • History of Astronomy • Constellations *(dividing the night sky)* • Ancient Models • The Scientific Method • Kepler & his laws • Newton & Gravity		**Basics 2:** • Astronomical Distances • Nature of Light • Doppler Effect • Magnitude scale • Naming of stars
Day 2 Saturday 2nd April 2016	**Celestial Mechanics** • Celestial Sphere • Celestial Coordinates • Time, Seasons • Phases of the Moons • Tides • Transits & Eclipses		**Our Solar System and other Star Systems** • Planets and Moons • The bit and pieces • The outer reaches of the Solar System • Origins of the Solar System • Other star systems
Day 3 Saturday 9th April 2016	**Stellar Astronomy/ Astrophysics** • Our Sun • Life cycle of Stars • Star Clusters • Classification of Stars		**Tools of Astronomy** • Types of Telescopes • How Telescopes work • Resolution & Magnification • Instrumentation **Practical session** Naked eye observing Guide to buying telescopes
Day 4 Saturday 16th April 2016	**"Seeing the Unseen Universe"** • The Universe beyond the visible • What are we made of? A journey into the realm of particle physics		**Galactic, Extra Galactic Astronomy & Cosmology** • The Milky Way & other Galaxies • Black Holes & The Exotic Realm • Hubble's Law & The Expanding Universe • The Standard Theory of Cosmology • The Dark Universe