

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI

Course Schedule: June - November 2024

Department : Mathematics
Name of the Faculty : Dr. AMALORE ARUMICA
Course Title : CELESTIAL WONDERS
Course Code : 19MT/GE/CW22
Shift : II

Week & No. of hours	Units & Topics	Teaching Methodology	Text & References	Method of Evaluation
Jun 19 – 26, 2024 (Day Order 1 - 6) 2 hours	Unit 1 Celestial Sphere and Diurnal Motion 1.1 Celestial Sphere 1.2 Diurnal Motion – Celestial Axis and Equator 1.3 Celestial Horizon	Lecture Video	Kumaravelu S, Susheela Kumaravelu, Astronomy. Sivakasi: A. Bhaskara Selvan, Revised and Enlarged Edition 2005, Reprint 2009.	Questioning
Jun 27 – July 4, 2024 (Day Order 1 - 6) 2 hours	Unit 1 Celestial Sphere and Diurnal Motion 1.4 Zenith and Nadir – Celestial Meridian 1.5 Cardinal Points – Different Hemispheres	Lecture	Kumaravelu S, Susheela Kumaravelu, Astronomy. Sivakasi: A. Bhaskara Selvan, Revised and Enlarged Edition 2005, Reprint 2009.	Slip Test
July 5 – 12, 2024 (Day Order 1 - 6) 2 hours	Unit 1 Celestial Sphere and Diurnal Motion 1.6 Visible and invisible Hemispheres 1.7 Declination circles, verticals 1.8 Rising and Setting	Lecture	Kumaravelu S, Susheela Kumaravelu, Astronomy. Sivakasi: A. Bhaskara Selvan, Revised and Enlarged Edition 2005, Reprint 2009.	Questioning
July 15 – 23,	Unit 1	Lecture	Kumaravelu S, Susheela	Questioning

2024 (Day Order 1 - 6) 2 hours	Celestial Sphere and Diurnal Motion 1.9 Transit or Culmination 1.10 Annual Motion of the Sun – First Point of Aries, First point of Libra, Equinoxes and solstices		Kumaravelu, Astronomy. Sivakasi: A. Bhaskara Selvan, Revised and Enlarged Edition 2005, Reprint 2009.	
July 24 – 31, 2024 (Day Order 1 - 6) 2 hours	Unit 1 Celestial Sphere and Diurnal Motion 1.10 Circumpolar Stars Unit 2 The Stellar Universe 2.1 The Milky Way Galaxy 2.2 Zodiacal Constellations	Lecture Video	Kumaravelu S, Susheela Kumaravelu, Astronomy. Sivakasi: A. Bhaskara Selvan, Revised and Enlarged Edition 2005, Reprint 2009.	Questioning
Aug 1 – 5, 2024 (Day Order 1 - 3) 1 hour	Unit 2 The Stellar Universe 2.3 Stars – Double Stars, Multiple Stars and Variable Stars	Lecture	Kumaravelu S, Susheela Kumaravelu, Astronomy. Sivakasi: A. Bhaskara Selvan, Revised and Enlarged Edition 2005, Reprint 2009.	Questioning
Aug 6 – 10, 2024	C.A. Test – I			
Aug 12 – 14, 2024 (Day Order 4-6) 1 hour	Unit 2 Planetary Phenomena 2.4 Direct Motion and Retrograde Motion 2.5 Stationary Points	Lecture	Kumaravelu S, Susheela Kumaravelu, Astronomy. Sivakasi: A. Bhaskara Selvan, Revised and Enlarged Edition 2005, Reprint 2009.	Quiz
Aug 16 – 23, 2024	Unit 2 The Solar System	Lecture	Kumaravelu S, Susheela Kumaravelu, Astronomy.	Observation in College

(Day Order 1-6) 2 hours	2.6 Sun, Planets, Comets, Meteors and Meteoroids		Sivakasi: A. Bhaskara Selvan, Revised and Enlarged Edition 2005, Reprint 2009.	through Telescope
Aug 27 – Sep 3, 2024 (Day Order 1-6) 2 hours	Unit 2 The Solar System 2.7 Astronomical Seasons on Earth	Lecture	Kumaravelu S, Susheela Kumaravelu, Astronomy. Sivakasi: A. Bhaskara Selvan, Revised and Enlarged Edition 2005, Reprint 2009.	III Component Group Seminars Unit 2 15 Marks
Sep 4 – 11, 2024 (Day Order 1-6) 2 hours	Unit 2 The Solar System 2.8 Celestial Calendar 2.9 Space Probes	Lecture	Kumaravelu S, Susheela Kumaravelu, Astronomy. Sivakasi: A. Bhaskara Selvan, Revised and Enlarged Edition 2005, Reprint 2009.	Questioning
Sep 12 - 20, 2024 (Day Order 1- 6) 2 hours	Unit 3 Moon and Eclipses 3.1 Elongation – Conjunction, Opposition, Quadratures 3.2 Daily Motion of the Moon – Age of Moon	Lecture	Bhatia V.B, Text Book of Astronomy and Astrophysics with elements of Cosmology, New Delhi: Narosa 2001	Visit to Birla Planetarium
Sep 23 - 26, 2024 (Day Order 1-4) 1 hour	Unit 3 Moon and Eclipses 3.3 Phase of Moon (definition only) – Successive Phases of Moon 3.4 Moon Exhibits the same side to the Earth	Lecture	Bhatia V.B, Text Book of Astronomy and Astrophysics with elements of Cosmology, New Delhi: Narosa 2001	C.A. 25 Marks Units 1 and 2
Sep 27 – Oct 3, 2024	C.A. Test – II			
Oct 4 – 5, 2024 (Day 5 & 6)	Unit 3 Moon and Eclipses 3.5 Surface Structure of	Lecture	Bhatia V.B, Text Book of Astronomy and Astrophysics with elements	Questioning

1 hour	Moon		of Cosmology, New Delhi: Narosa 2001	
Oct 7 - 15, 2024 (Day Order 1 to 6) 2 hours	Unit 3 Moon and Eclipses 3.6 The Tides - Tsunami	Lecture	S. Santha, Transforms and Partial Differential Equations, Vijay Nicole Imprints Private Limited, Chennai, 2009.	Questioning
Oct 16 - 22, 2024 (Day Order 1 to 6) 2 hours	Unit 3 Moon and Eclipses 3.7 Types of Eclipses – Lunar and Solar Eclipse (no derivations), Duration of a Solar Eclipse 3.8 Importance of Total Solar Eclipses	Lecture Video	S. Santha, Transforms and Partial Differential Equations, Vijay Nicole Imprints Private Limited, Chennai, 2009.	III Component Quiz Unit 3 10 Marks
Oct 23 - 24, 2024 (Day Order 1 to 2) 1 hour	REVISION			

Observation and Visit to Planetarium

Observation in College: Sun spots, planets, meteors, constellations, moon and its craters, comets and eclipses