10-DAY CERTIFICATE COURSE TITLED "FOUNDATION COURSE IN ASTRONOMY & ASTROPHYSICS"

July 12 – 22, 2017

Department of Astronomy, Osmania University, Hyderabad- 500 007

The Department of Astronomy is organizing a 10-Day certificate course **"Foundation course in Astronomy and Astrophysics"** in the Department of Astronomy, Osmania University, Hyderabad, during **July 12 – 22, 2017**. The course is aimed to popularize Astronomy in young minds which will help them develop strong foundations in the subject and motivate them to choose it as a career option. The candidates who are pursuing/completed graduation, with Maths, Physics and computers at intermediate (10+2) level are eligible to enroll in the course. Those who are interested to enroll can register on or before **5th July 2017** by sending their details in the enclosed registration form through mail to coordinator, **astronomyatou@gmail.com**. The registration fee is Rs. 3,000 (Rupees three thousand only) to be paid through DD in favor of "Co-Ordinator, Foundation course in A & Ap, OU, Hyd". The payment can be done through online transfer also to Ac/No: 36925752331, State Bank of India (Arts college Premises), Osmania University;IFSC Code SBIN0020071. ***The short-listed candidates will be informed via email/phone by 6 July 17, and the candidates can proceed to pay the registration fees on or before 11 July 17.***

HEAD
Department of Astronomy,
Osmania University, Hyderabad.

Contact Address:
Dr. D. Shanti Priya
Head
Department of Astronomy
Osmania University
Hyderabad
Email: **astronomyatou@gmail.com**
Ph. No: (O): 040-27682247

Last Date for Registration: 5-07-2017
Shortlisted candidates will be informed by: 6-07-2017
Last day to pay the fees: 11-07-2017
Date of commencement of course: 12-07-2017
Date of completion of course: 22-07-2017

REGISTRATION FORM

Affix recent passport size picture

1. NAME: _____
2. *QUALIFICATION: _____
3. ORGANIZATION: _____
4. DATE OF BIRTH: (dd/mm/yy)_____
5. ADDRESS: _____
6. CONTACT NO: _____
7. E-MAIL: _____
8. OTHERS (if any) _____

(*Note: Enclose the proof of education qualification)

Signature of the Candidate

ANNEXURE I

Course details – 10 days (30-hours) certificate course in Astronomy and Astrophysics by Department of Astronomy, Osmania University.

Course Title: Foundation Course in Astronomy & Astrophysics

Course Schedule

Eligibility: The course is open to all candidates who are pursuing/completed Graduation with Maths, Physics, Computers at Intermediate (10+2) level and are having an aptitude for Astronomy and Astrophysics. Knowledge of English language is necessary as mode of course will be in English.

Batches: The number of seats in a batch is limited to **30 ONLY.** Admissions will be done on **first-come-first-served basis**.

Schedule for next batch: **Tentatively June**

Duration: **Classroom Sessions:**
2:30 p.m. to 5.30 p.m.

Field Trip: Japal Rangapur Observatory (JRO)
Students will be given an exposure to skywatch during the period of the course.

Course Fees:

Course fee: Rs. 3000

Contact: **Phone: 040-27682247**

Email: astronomyatou@gmail.com

Course Overview:

Aim

The primary aim of this program is to inculcate a scientific awareness of the subject of Astronomy among the young students and motivate them to pursue careers in Astronomy and Astrophysics. The course work is planned as an extra subject beyond the regular University curriculum. The course includes theory classes, practical/project sessions, field trip to Astronomical Observatory, project presentations. On completion of the course, the students will be awarded certificates with grades based on overall performance.

Course Benefits

The course provides an in-depth knowledge to fundamentals involved in the study of Astronomy and Astrophysics. It will develop strong foundation in the subject which would be a platform for the students seeking higher studies and research work in the subject. It is a domain which will survive for at least another 200 years and as India is involved in many international projects worth billions of dollars such courses would benefit and encourage the student community to opt for advanced studies.

Faculty

The Lectures will be taken by professors of the department as well as renowned scientists and professors of various scientific institutions and universities in and around Hyderabad.

Course work

Syllabus

The syllabus for the certificate course is framed to understand and cover topics from basics to black holes in Astronomy and Astrophysics. It also involves students working on small projects and presenting the same at the end of the course.

The topics to be covered in lecture sessions:

Basics of Astronomy (Celestial coordinates, Constellations, Time, distances etc.,)

Origin of Life in the universe and its future

Solar system (Including planets and minor bodies like Asteroids, Meteors & Comets)

Stellar evolution (Life of a Star, Exo-planets)

Galaxies and their structure (Einstein's Gravitational waves)

Astronomical instrumentation (TMT, WEBB & other space based telescopes)

High energy Universe (ASTROSAT satellite)

Unsolved mysteries of Universe (Dark energy, Dark matter etc.)

The Practical sessions include:

Exploring Star charts and identifying constellations

Making of simple spectroscope

Study of Sunspots

Spectral classification of stars using virtual observatory

Working on archival data (data available from satellites)

Observing the night sky (identifying constellations and observing planets through telescope)

Modelling a Radio telescope using satellite dish antenna and studying solar activity.

Field Trip:

The students will be taken to Japal-Rangapur observatory (JRO) and will be given an exposure to the night sky observation.

Registration and Admission:

Interested candidates may register their names providing their brief bio-data in the Department of Astronomy along with two recent passport size photographs.

The right to admission will solely rest with the Department of Astronomy, OU.

Co-Ordinator,
Foundation course in Astronomy and Astrophysics,
Department of Astronomy,
Osmania University.