

# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

## AERONAUTICAL ENGINEERING

## ATTAINMENT OF COURSE OUTCOME - ACTION TAKEN REPORT

| Name of the faculty:        | Dr. Prasanta Kumar Mohanta | Department:   | Aeronautical<br>Engineering |  |
|-----------------------------|----------------------------|---------------|-----------------------------|--|
| Regulation:                 | IARE - R16                 | Batch:        | 2016 - 2020                 |  |
| Course Name:                | Space Mechanics            | Course Code:  | AAE016                      |  |
| Semester: VII Target Value: |                            | Target Value: | 65% (1.8)                   |  |

### **Attainment of COs:**

| Course Outcome |   | Direct<br>attainment | Indirect<br>attainment | Overall attainment | Observation                                |
|----------------|---|----------------------|------------------------|--------------------|--|
| CO1            | Relate the concepts in Solar system,<br>Lagrange-Jacobi identity and N-body<br>problem for describing the reference frames,<br>coordinate systems and Earth's atmosphere.             | 1.6                  | 2.6                    | 1.8                | Attainment target reached                  |
| CO2            | Demonstrate the dependence of orbital parameters of orbit deviations using Orbital elements for Launch vehicle ascent trajectories.   | 0.9                  | 2.7                    | 1.3                | Attainment target is not yetreached        |
| CO3            | Identify the Equations of motion and characteristics of orbits using the relation between orbital elements and position for different orbits.   | 0.9                  | 2.6                    | 1.2                | Attainment<br>target is not<br>yet reached |
| CO4            | Classify the 2D, 3D interplanetary trajectories and general perturbations in Cowell's Method for launching interplanetary spacecraft and identifying trajectory of the target planet. | 0.3                  | 2.7                    | 0.8                | Attainment<br>target is not<br>yet reached |
| CO5            | Outline the boost phase, ballistic phase and trajectory geometry using the techniques of Re-entry for Ballistic Missile Trajectories.   | 0.3                  | 2.7                    | 0.8                | Attainment target is not yet reached       |
| CO6            | Demonstrate the mission performance parameters with help of constant radial thrust acceleration, constant tangential thrust for Low thrust trajectories.                              | 0.3                  | 2.6                    | 0.8                | Attainment target is not yet reached       |

## Action taken report:

CO 2: Remedial classes have been conducted.

CO 3: Remedial classes have been conducted.

CO 4: Digital content and videos given in classes for better understanding of concept.

CO 5: Application oriented problems may be given.

CO 6: Real time application may be better for attainment.

Course Coordinator

Mentor

Head of the Debatment
Aeronautical Engineering
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