



# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

MECHANICAL ENGINEERING

## ATTAINMENT OF COURSE OUTCOME – ACTION TAKEN REPORT

|                      |                                 |               |                    |
|----------------------|---------------------------------|---------------|--------------------|
| Name of the faculty: | <b>Ms. T Vanaja</b>             | Department:   | <b>ME</b>          |
| Regulation:          | <b>IARE - R16</b>               | Batch:        | <b>2017 - 2021</b> |
| Course Name:         | <b>Engineering Optimization</b> | Course Code:  | <b>AME516</b>      |
| Semester:            | <b>V</b>                        | Target Value: | <b>60% (1.8)</b>   |

### Attainment of COs:

| Course Outcome |  | Direct attainment | Indirect attainment | Overall attainment | Observation                   |
|----------------|--|-------------------|---------------------|--------------------|-------------------------------|
| CO1            | Define and use optimization terminology and concepts, and understand how to classify an optimization problem.  | 0.90              | 1.90                | 2.9                | Attainment target reached     |
| CO2            | Outline optimization methods to engineering problems, including developing a model, defining an optimization problem, applying optimization methods, exploring the solution, and interpreting results. | 3.00              | 2.00                | 1.2                | Attainment target not reached |
| CO3            | Explain multi variable unconstrained optimization theory for Univariate, Hooke Jeeve's and Simplex methods.  | 3.00              | 2.00                | 1.2                | Attainment target not reached |
| CO4            | Apply unconstrained optimization theory for continuous problems, such as: Steepest descent, Conjugate gradient, and Variable metric methods.   | 2.30              | 2.30                | 2.9                | Attainment target reached     |
| CO5            | Illustrate methods for computing derivatives such as: Lagrangian method, Inequalities, Kuhn-Tucker necessary and sufficient conditions.  | 2.30              | 2.30                | 2.4                | Attainment target reached     |
| CO6            | Identify constrained and unconstrained optimization problems, including posynomials, arithmetic, Geometric programming and Gomary cutting plane algorithm.   | 0.90              | 2.30                | 2.4                | Attainment target reached     |

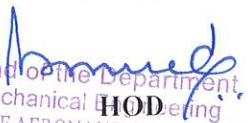
### Action taken report:

CO2: Additional Tutorial hours required to understand the optimization methods.

CO3: Additional exercise required to solve multi variable unconstrained optimization theory for Univariate, Hooke Jeeve's and Simplex methods.

  
Course Coordinator

  
Mentor

  
Head of the Department,  
Mechanical Engineering  
HOD  
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