

## **EAS437 Reliability-Centered Maintenance**

**Level:** 4

**Credit Units:** 5 Credit Units

**Language:** ENGLISH

**Presentation Pattern:** EVERY JULY

### **Synopsis:**

It will provide students with an understanding on how maintenance programmes are developed and managed both in the civilian and military aerospace sectors. Designing and evaluating reliability-centered maintenance systems will be studied. Local case studies will be used in assessments and seminar discussions.

### **Topics:**

- Development of maintenance programmes
- Definitions, goals and objectives of aerospace maintenance
- Failure patterns study
- Analysis of functions and failures
- P to F curve; condition monitoring and on-condition maintenance
- Life cycle of RCM
- Designing a reliability-centered maintenance system
- RCM methodologies
- MSG-3 techniques
- Requirements for a maintenance programme, and failure finding
- Organizing maintenance reliability board
- Measurement of reliability and maintenance performance

### **Textbooks:**

Neil Bloom: Reliability Centered Maintenance (RCM): Implementation Made Simple (2005)-  
(Customised Text ISBN:9781307082555) McGraw-Hill  
ISBN-13: 9780071460699

Neil Bloom: Reliability Centered Maintenance (RCM): Implementation Made Simple (2005) McGraw-Hill  
ISBN-13: 9780071460699-AA

**Learning Outcome:**

- Discuss the development of maintenance programmes
- Analyse functions and failures
- Evaluate the requirements for a maintenance programme, and failure finding
- Recommend methodologies to study the life cycle of RCM
- Formulate a failure patterns study scheme
- Construct methods to carry out condition monitoring and on-condition maintenance
- Assess the design process of a reliability-centered maintenance system (Practical Component)
- Appraise MSG-3 techniques

**Assessment Strategies:**

<b>Continuous Assessment Component</b>	<b>Weightage (%)</b>
QUIZ	15
TUTOR-MARKED ASSIGNMENT	15
<b>Sub-Total</b>	<b>30</b>

<b>Examinable Component</b>	<b>Weightage (%)</b>
Written Exam	70
<b>Sub-Total</b>	<b>70</b>

**Weightage Total** **100**