

# **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-centred 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-centred maintenance system
- RCM methodologies
- MSG-3 techniques
- Requirements for a maintenance programme, and failure finding
- Organising maintenance reliability board
- Measurement of reliability and maintenance performance

## **Textbooks:**

EAS437 Study Guide (Online)  
ISBN-13: SG-0823

Reliability Centered Maintenance (RCM): Implementation Made Simple Neil Bloom McGraw-Hill  
ISBN-13: 9780071589185

**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-centred maintenance system (Practical Component)
- Appraise MSG-3 techniques

**Assessment Strategies - Regular Semester (Evening Class):**

<b>Components</b>	<b>Description</b>	<b>Weightage Allocation (%)</b>
Overall Continuous Assessment	QUIZ 1	15
	TUTOR-MARKED ASSIGNMENT 1	15
Overall Examinable Components	Written Exam	70
<b>Total</b>		<b>100</b>

\*The information listed is subject to review and change.