



# Course Outline (Higher Education)

|                         |   |
|-------------------------|---|
| <b>School:</b>          | School of Engineering, Information Technology and Physical Sciences |
| <b>Course Title:</b>    | MAINTENANCE MANAGEMENT  |
| <b>Course ID:</b>       | MREGC5002   |
| <b>Credit Points:</b>   | 15.00   |
| <b>Prerequisite(s):</b> | Nil   |
| <b>Co-requisite(s):</b> | Nil   |
| <b>Exclusion(s):</b>    | Nil   |
| <b>ASCED:</b>           | 039999  |

## Description of the Course :

This course introduces the fundamentals of maintenance management. It covers introduction to computerised maintenance management system (CMMS), maintenance planning, scheduling and control, roles and responsibilities of the work management process, implementation of maintenance planning systems, objectives of the maintenance department, types of failures and maintenance strategies. It also encompasses organisational structures of a maintenance department, job descriptions and role accountabilities and documentation requirements for CMMS systems depending on size and type of organisation. This is an important foundational course for students interested in practicing good asset management and maintenance management.

**Grade Scheme:** Graded (HD, D, C, etc.)

**Placement Component:** No

## Program Level:

| Level of course in Program | AQF Level of Program     |                          |                          |                                     |                          |                          |
|----------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|
|                            | 5                        | 6                        | 7                        | 8                                   | 9                        | 10                       |
| Introductory               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| Intermediate               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Advanced                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |

**Learning Outcomes:**

On successful completion of the course the students are expected to be able to:

**Knowledge:**

- K1.** Define Maintenance Management Systems and Processes and the application used to manage the asset throughout the life cycle.
- K2.** Distinguish the roles and responsibilities within the Asset Management department and their accountabilities of the Maintenance Management processes.
- K3.** Appraise and determine correct application of maintenance strategy selection methodologies.

**Skills:**

- S1.** Evaluate a CMMS/EAM application and appraise process application
- S2.** Analyse the results of work management processes and identify improvement opportunities.
- S3.** Prepare recommendations for introduction or change of new processes/systems

**Application of knowledge and skills:**

- A1.** Differentiate the elements of a maintenance management system and the maintenance management planning processes with alignment to the maintenance organisational roles.
- A2.** Develop recommendations for change or improvements of the maintenance systems and application
- A3.** Articulate the linkage and benefits between occupational health and safety and the maintenance management systems.

**Course Content:**

This course covers maintenance planning, objectives of the maintenance department and introduces computerised maintenance management system (CMMS).

Topics may include:

- Introduction to Maintenance Management.
- Maintenance Planning.
- Computerised Maintenance Management Systems.
- The Maintenance Organisation.
- Occupational Health and Safety in Maintenance Work.
- Planning for the future in maintenance management.

**Values:**

- V1.** Be confident in maintenance management.
- V2.** Understand Maintenance Management Systems and Processes.

**Graduate Attributes**

The Federation University FedUni graduate attributes (GA) are entrenched in the Higher Education Graduate Attributes Policy (LT1228). FedUni graduates develop these graduate attributes through their engagement in explicit learning and teaching and assessment tasks that are embedded in all FedUni programs. Graduate attribute attainment typically follows an incremental development process mapped through program progression. **One or more graduate attributes must be evident in the specified learning outcomes**

and assessment for each FedUni course, and all attributes must be directly assessed in each program

| Graduate attribute and descriptor |  | Development and acquisition of GAs in the course |   |                       |  |
|-----------------------------------|--|--|---|-----------------------|--|
|                                   |  | Learning Outcomes (KSA)                          | Code<br>A. Direct<br>B. Indirect<br>N/A Not addressed | Assessment task (AT#) | Code<br>A. Certain<br>B. Likely<br>C. Possible<br>N/A Not likely |
| GA 1 Thinkers                     | Our graduates are curious, reflective and critical. Able to analyse the world in a way that generates valued insights, they are change makers seeking and creating new solutions.  | K1-K3, S1-S3, A1-A3                              | A   | AT1, AT2              | A  |
| GA 2 Innovators                   | Our graduates have ideas and are able to realise their dreams. They think and act creatively to achieve and inspire positive change.   | K1-K3, S1-S3, A1-A3                              | B   | AT1, AT2              | B  |
| GA 3 Citizens                     | Our graduates engage in socially and culturally appropriate ways to advance individual, community and global well-being. They are socially and environmentally aware, acting ethically, equitably and compassionately.                                       | K1-K3, S1-S3, A1-A3                              | B   | AT2                   | C  |
| GA 4 Communicators                | Our graduates create, exchange, impart and convey information, ideas, and concepts effectively. They are respectful, inclusive and empathetic towards their audience, and express thoughts, feelings and information in ways that help others to understand. | K1-K3, S1-S3, A1-A3                              | A   | AT1, AT2              | A  |
| GA 5 Leaders                      | Our graduates display and promote positive behaviours, and aspire to make a difference. They act with integrity, are receptive to alternatives and foster sustainable and resilient practices.   | K1-K3, S1-S3, A1-A3                              | B   | AT2                   | B  |

### Learning Task and Assessment:

This 15 CP online course at postgraduate level requires a minimum time commitment of 150 hours of study. Assessments need to be submitted online in assessment submission area allocated for each assessment.

| Learning Outcomes Assessed         | Learning Tasks  | Assessment Type            | Weighting |
|------------------------------------|---|----------------------------|-----------|
| K1, K2, S1,S2, A1, A2              | Analysis and report on maintenance planning and system.   | Analysis and report        | 10% - 40% |
| K3, S3, A3                         | Analysis and report on maintenance organisation and organisation, health, safety and environment. | Analysis and report        | 10% - 40% |
| K1, K2, K3, S1, S2, S3, A1, A2, A3 | Examination or online Test  | Examination or online Test | 60% - 40% |

**Adopted Reference Style:**

Other (IEEE)