

**APPROVED**

## EN8906: Vibration, Noise and Mechanics of Machine

### Course Details

|                    |                                                                                                                                                                                                                                                |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course Code:       | EN8906                                                                                                                                                                                                                                         |
| Course Title:      | Vibration, Noise and Mechanics of Machine <b>APPROVED</b>                                                                                                                                                                                      |
| Short Title:       | Vibration                                                                                                                                                                                                                                      |
| Course Level::     | Level 8                                                                                                                                                                                                                                        |
| Valid From::       | 2021/2022 Sem 1                                                                                                                                                                                                                                |
| Credits::          | 15                                                                                                                                                                                                                                             |
| Owner:             | Engineering Technology                                                                                                                                                                                                                         |
| Assessment Method: | Achievement                                                                                                                                                                                                                                    |
| Course Aim         | To enable students to apply specialist skills using concepts of mechanics in machines, select appropriate transmission systems for various applications, investigate fluctuation of energy in flywheels ,minimise vibration and sound control. |

| CILO                                                                                                              |                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| On Completion of this course, the learner will be able to                                                         |                                                                                                                                         |
| #                                                                                                                 | Learning Outcome Description                                                                                                            |
| 1                                                                                                                 | Demonstrate critical knowledge and understanding of velocity and acceleration for various planar mechanism.                             |
| 2                                                                                                                 | Critically analyse transmission elements to select appropriate components, such as gears ,gear trains ,belt drives shafts and bearings. |
| 3                                                                                                                 | Design appropriate flywheels by critically analysing flywheel energy from turning moment diagrams.                                      |
| 4                                                                                                                 | Use evaluations of vibration parameters to minimise vibration in mechanical systems.                                                    |
| 5                                                                                                                 | Demonstrate critical knowledge of sound measurement, sound transmission, and reverberation.                                             |
| Requisites                                                                                                        |                                                                                                                                         |
| <ul style="list-style-type: none"> <li>Pre Requisite: 60 Credits at level 7 in B.Eng Tech (Mechanical)</li> </ul> |                                                                                                                                         |

| Examinations                                           |
|--------------------------------------------------------|
| <b>Assessment Type</b><br>Examination (seen/open book) |
| Other Controlled Assessments                           |
| <b>Assessment Type</b><br>Simulation                   |
| Uncontrolled Assessments                               |
| <b>Assessment Type</b><br>Practical Project            |

| Affiliated Entities |              |                |             |
|---------------------|--------------|----------------|-------------|
| Entity Code         | Entity Title | Entity Version | Entity Type |
| None                |              |                |             |