

EN8906 Vibration, Noise and Mechanics of Machine



**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.

<b>Short Title</b>	Version 2
<b>Faculty</b> EDICT	<b>Effective From</b> September 1, 2016
<b>Polytechnic Level</b>	<b>Indicative NQF Level</b> 8
<b>Credits</b> 15	<b>Student Contact hrs</b> 60
<b>Pre-requisites</b> 60 Credits at level 7 in BENG Tech (Mechanical)	<b>Self-directed hrs</b> 90
<b>Co-requisites</b> None	<b>Other directed hrs</b> 0
<b>Anti-requisites</b> None	<b>Total learning hrs</b> 150

Learning Outcomes	On successful completion of this course, students will be able to:	NQF Sub-strand
1	Demonstrate critical knowledge and understanding of velocity and acceleration for various planar mechanisms.	Generic, Problem Solving and Analytical Skills
2	Critically analyse transmission elements to select appropriate components, such as gears ,gear trains ,belt drives shafts and bearings	Practical Application of knowledge
3	Design appropriate flywheels by critically analysing flywheel energy from turning moment diagrams.	Theoretical Understanding
4	Use evaluations of vibration parameters to minimise vibration in mechanical systems.	Practical Application of knowledge
5	Demonstrate critical knowledge of sound measurement, sound transmission, and reverberation .	Theoretical Understanding