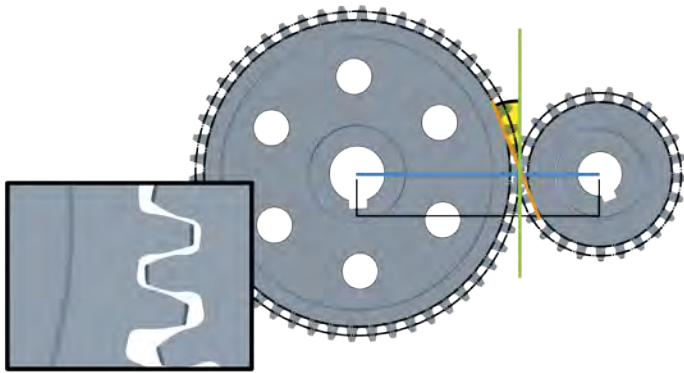


# GEARS: SPUR AND HELICAL GEAR TERMINOLOGY

*eLearning courses designed to increase productivity and profits*



## Learning made Simple, Visual, and Interactive

This course is designed for any learner who must be familiar with commonly used terminology for spur and helical gears. The course provides a basic understanding of parallel axis gearing, including the identification of these types of gears, essential terminology, and important calculations.

Credit Hours **0.75**

## Learning Objectives

- 💡 Recognize the different types of spur and helical gears.
- 💡 Understand and recognize the commonly used terms as it relates to spur and helical gears.

## Table of Contents

### I. What are Spur and Helical Gears?

#### • Gear Types

### II. Commonly Used Terminology

#### • Axis, Planes, and Helix

- o Axis of Rotation
- o Normal Plane
- o Transverse Plane
- o Helix
- o Lead
- o Helix Angle
- o Hand of Helix

#### • Gear Geometry

- o Involute
- o Flank
- o Profile
- o Tooth Helix
- o Tooth Alignment
- o Gear Quality

#### • Gear Diameters

- o True Involute Form (TIF) Diameter
- o Start of Active Profile (SAP) Diameter
- o Pitch Point
- o Pitch Circle Diameter
- o Root Circle Diameter

#### • Pitch

- o Diametral Pitch
- o Module
- o Base Pitch
- o Circular Pitch

#### • Gear Motion

- o Line of Centers
- o Center Distance
- o Line of Action
- o Pressure Angle
- o Backlash

#### • Gear and Contact Ratio

#### • Tooth Depth and Thickness

- o Addendum and Dedendum
- o Depth and Thickness

#### • Tooth Features

- o Face Width
- o Top Land
- o Bottom Land
- o Relieving
- o Crowning

