MIET2510

Mechanical Design

Week 6 – Gear Design – Part 2

School of Science and Technology, RMIT Vietnam

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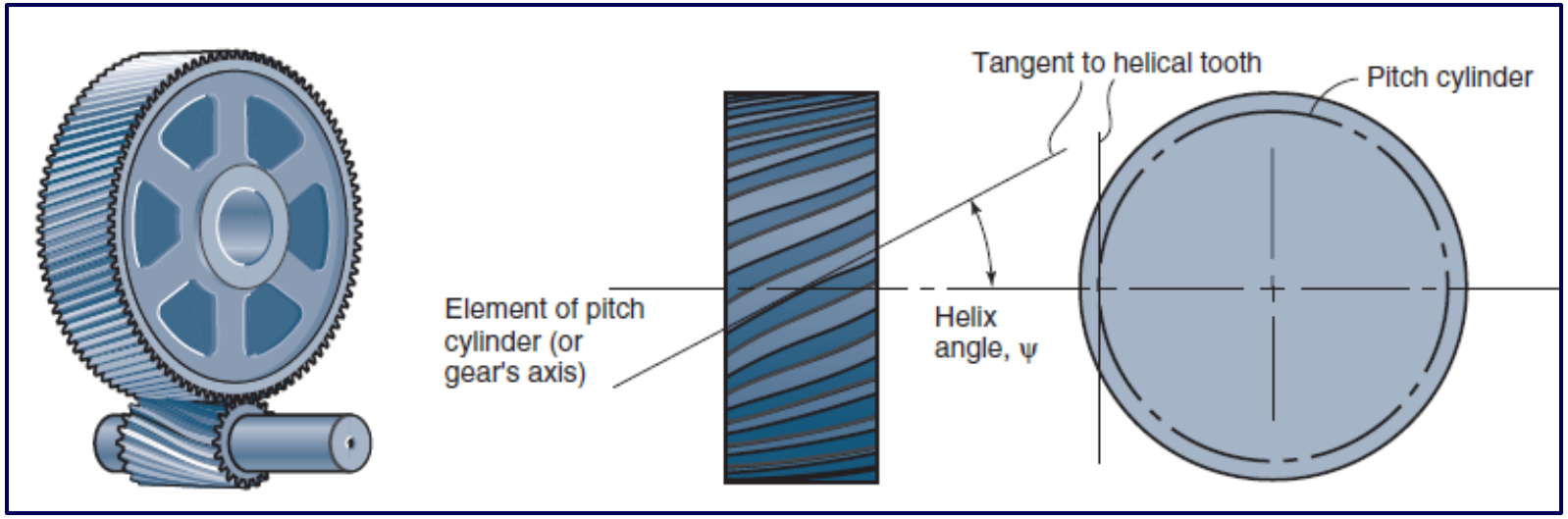
Helical Gears



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Bevel Gears

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Worm Gears

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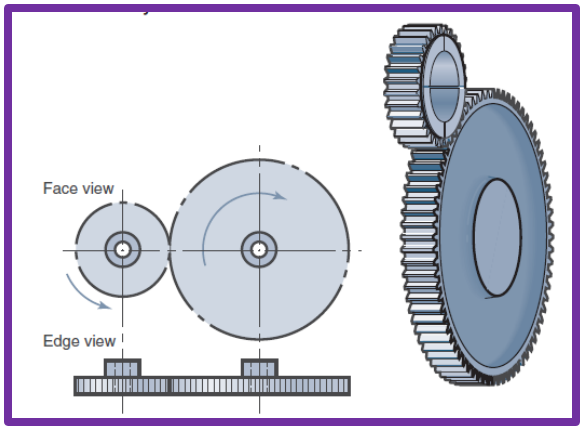
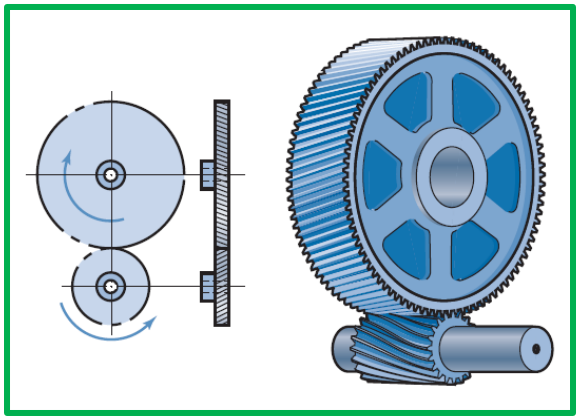
Classification of Gears

Gears can be divided into **three major classes**:

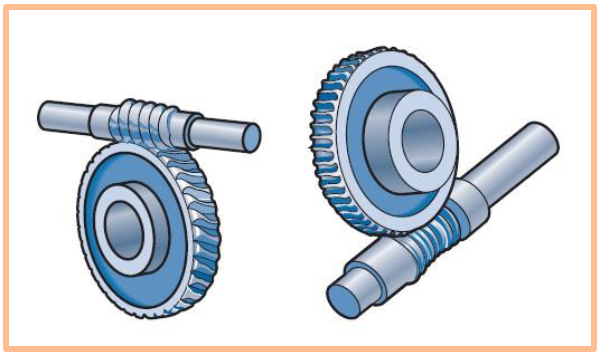
Parallel-axis gears





Nonparallel but coplanar gears

Nonparallel and noncoplanar gears



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Studying Instructions and Objectives

Please refer to the lecture note and make sure you are;

- Familiar with gear nomenclature and present them in the diagram.
- Able to calculate fundamental and related parameters for a gear.
- Able to determine empirical factors based on assumptions and information provided.
- Able to determine the forces and stresses acting on gear teeth.
- Able to determine the velocity of each gear in a gear train.
- Able to calculate the input and output power.
- Able to select gears from manufacturers catalogue.

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Thank you for your attendance :D

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Reference

- *Mechanical Design of Machine Components (2nd) by Ansel C.Ugural.*
- *Mechanical Engineering Design (10th) by Richard G.Budynas and J. Keith Nisbett.*
- *Theory of Machines and Mechanisms (5th) by John J.Uicker, Gordon R.Pennock, Joseph E. Singley.*

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