



**MECHANICAL  
ENGINEERING**

# Spur and Helical Gear Cutting

<b>Type of Course</b>	: New
<b>Course Snapshot</b>	: Core / UG / PG
	: B.E /B.Tech, M.E/M.Tech
<b>Pre-requisites</b>	: Workshop Technology
<b>Course Duration</b>	: 10 hours / 4 weeks
<b>Industry Support</b>	: Gear manufacturing industries

## **COURSE OUTLINE:**

These lectures would introduce the basic principles of spur and helical gear machining to the reader. First the concept of spur and helical gears would be introduced, followed by their uses, applications, nomenclature etc. A discussion on some commonly used machine elements would follow, which are required in subsequent lectures. Next, the concept of gear milling (including simple and differential indexing), gear shaping and gear hobbing for machining both straight spur and helical gears would be discussed. At every stage – there would be discussions on a number of numerical problems and multiple choice questions

## **INSTRUCTOR:**

Prof. Asimava Roy Choudhury  
Department of Mechanical Engineering  
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## **ABOUT INSTRUCTOR:**

Prof. Asimava Roy Choudhury received his B.E, (Mechanical) Degree from Jadavpur University in 1983, M.Tech. (Machine Tools Engg) from IIT Kharagpur in 1984 and Ph.D. (Engg) from IIT Kharagpur in 1999. Asimava Roy Choudhury is at present a professor in the Mechanical Engineering Department of IIT Kharagpur. His interests include: Computer numerical control, Direct slicing in Rapid Prototyping, Non-traditional manufacturing processes and Laser coating of surfaces.

## **COURSE LAYOUT:**

Week 1 : Introduction to spur and helical Gears

Week 2 : Milling of spur Gears

Week 3 : Gear Shaping

Week 4 : Gear Hobbing