This presentation module discusses different machines and machining issues. The module breaks down the removal processes into four commonly recognized categories:

- Milling
- Turning
- Drilling
- Grinding

First, a short explanation of machining degrees of freedom is given. Next, a more in-depth explanation of each of the processes is described. The presentation discusses the basic machine operations of the lathe and mill, followed by a description of the cutting tools and components.

Conventional and climb milling are described including advantages and disadvantages of each method. Calculation of the scallop height is presented for both horizontal and inclined surfaces.

Next, the module describes a short description of drilling and grinding processes. Different types of surface grinders are shown.

Finally, calculation of surface roughness (both arithmetic and rms) is shown along with typical roughness units for different machining operations.