Computer programs are a vital and integral part of the engineer’s learning and knowledge base. Computers are used to assist in the design, analysis and manufacturing process.

This module presents the basic history and role of Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM) in engineering. Computer aided design is the use of a computer to assist in the design process. It explains the uses of CAD in many applications such as modeling, kinematics, simulations, and optimization.

Different modeling methods are discussed in further detail. The modeling methods include:

I Geometric Modeling
   A) Graphical Modeling
   B) Surface Modeling
   C) Solid Modeling
II Feature Based Modeling

This module focuses on the solid modeling for engineering. Further subcategories include decomposition, constructive and the boundary representation modeling methods.

Finally, the presentation discusses Computer Aided Machining (CAM), as it pertains to machining. The presentation ends with a demonstration of a CAM program operation.