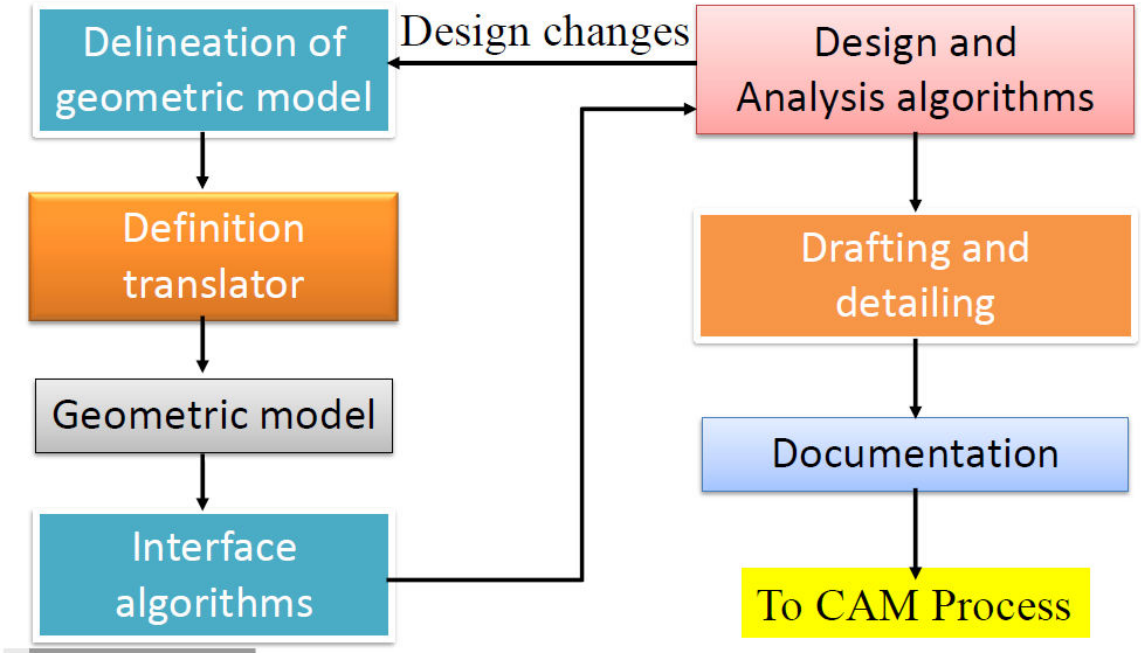
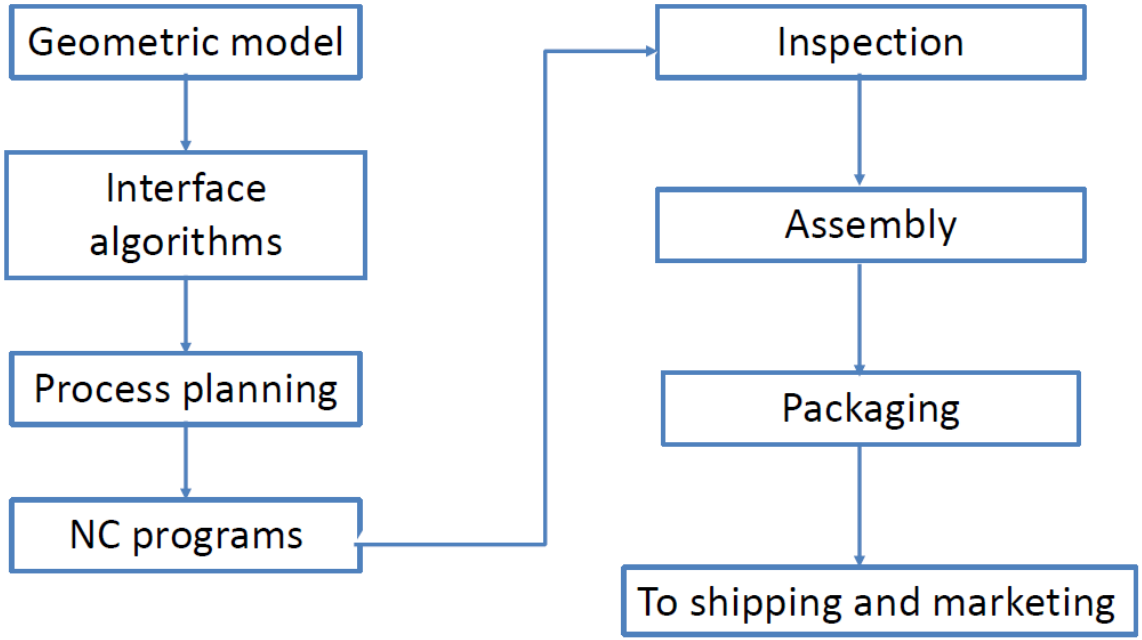
Implementation of a Typical CAD Process on a CAD/CAM system



CAD Tools Required to Support the Design Process

Design phase	Required CAD tools
Design conceptualization	Geometric modeling techniques; ; manipulations; and visualization
Design modeling and simulation	Same as above; ; special modeling packages.
Design analysis	; customized programs and packages.
Design optimization	Customized applications;
Design evaluation	; BOM; NC.
Design communication and documentation	…

Lecture No 4 Topic: Implementation of a Typical CAM Proce on a CAD/CAM system



CAM Tools Required to Support the Design Process

Manufacturing phase	Required CAM tools
Process planning	CAPP techniques; cost analysis; material and tooling specification.
Part programming	NC programming
Inspection	CAQ; and Inspection software
Assembly	Robotics simulation and programming

Advantages of CAD/CAM systems

- Greater flexibility.
- Reduced lead times.
- Reduced inventories.
- Increased Productivity.
- Improved quality.
- Improved communications with suppliers.
- Better product design.
- Supported integration.
- Reduced costs.
- Less floor space.
- Increased utilization.
- Improved customer service.
- Greater manufacturing control.
- Reduction of machine tools.