

# Lecture # 3.1

## Manufacturing Considerations in Design

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The following are the various manufacturing processes used in Mechanical Engineering.

## 1. Primary shaping processes.

The processes used for the preliminary shaping of the machine component are known as primary shaping processes.

The common operations used for this process are

Casting,	Forging,	Extruding,
Rolling,	Drawing,	Bending,
Shearing,	Spinning,	Powder Metal Forming,
Squeezing, etc.		

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## 2. Machining processes.

The processes used for giving final shape to the machine component, according to planned dimensions are known as machining processes.

The common operations used for this process are

Turning,	Planing,	Shaping,	Drilling,
Boring,	Reaming,	Sawing,	Broaching,
Milling,	Grinding,	Hobbing,	etc.

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## 3. Surface finishing processes.

The processes used to provide a good surface finish for the machine component are known as surface finishing processes.

The common operations used for this process are

Polishing, Buffing, Honing, Lapping,

Abrasive Belt Grinding, Barrel Tumbling,

Electroplating, Superfinishing, Sheradizing, etc

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## 4. Joining processes.

The processes used for joining machine components are known as joining processes.

The common operations used for this process are

Welding,

Riveting,

Soldering,

Brazing,

Screw Fastening,

Pressing,

Sintering, etc.

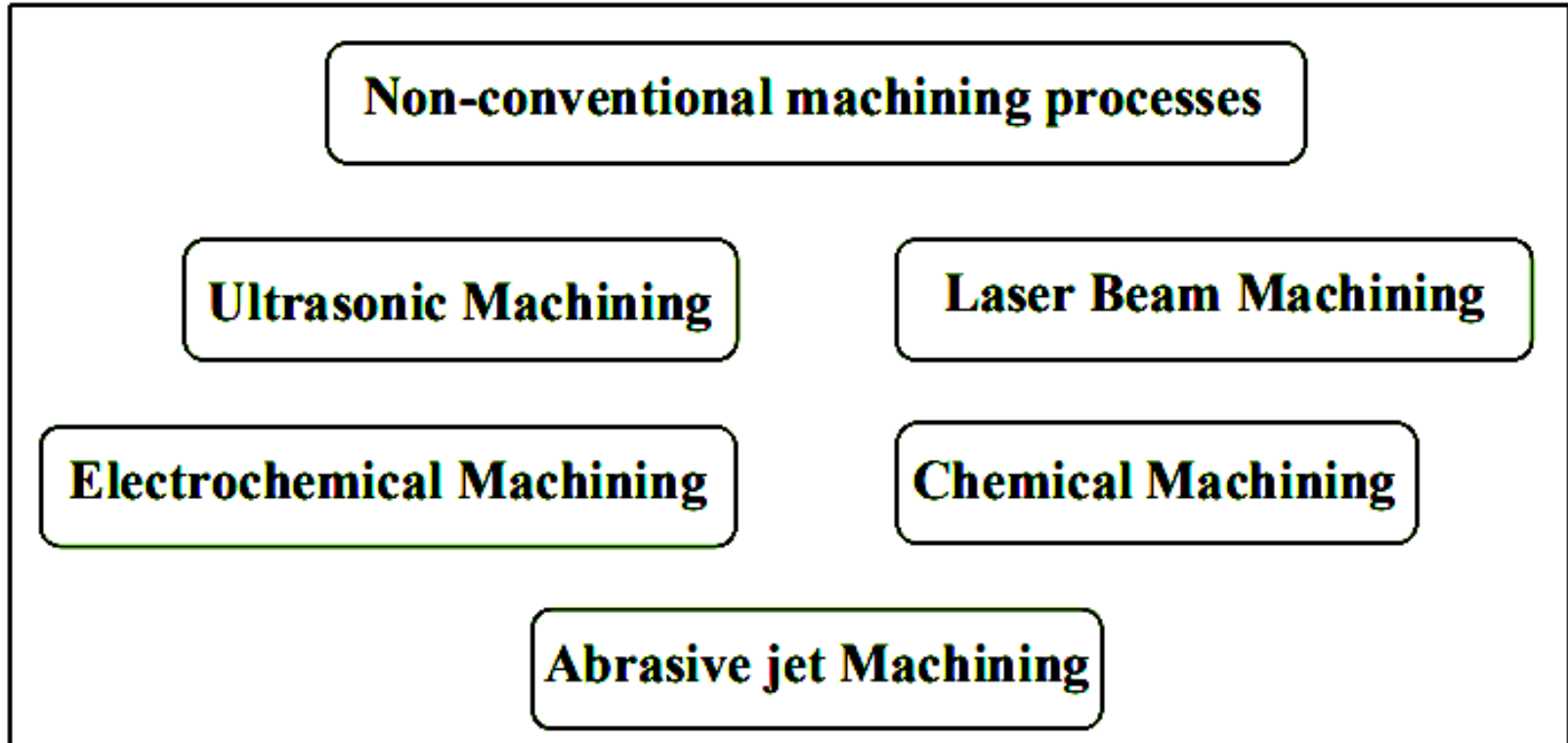
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## Other Manufacturing Processes.

Non-Conventional Machining

Heat Treatment of the Product

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# References

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