

# Advanced Manufacturing Processes (AMPs) (BTM 4723)

## Course Synopsis, Learning Outcomes and Transferrable Skills

by

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Course Information

# Course Synopsis

- This course intends to provide the in depth knowledge of the types of advanced manufacturing and machining processes (AMPs); evolution, and need.
- In this course students will study the fundamentals and advanced techniques related to manufacturing processes.
- In addition to the applied aspects of manufacturing processes, a sound analytical basis for some of the processes will be taught.
- Through the use of analytical approaches in conjunction with laboratory practical's students will learn how to control a manufacturing process for optimal production.
- This course builds a foundation of capability for the solution, analysis and synthesis of a wide variety of manufacturing problems.
- This course includes Mechanical Type AMPs, Advanced Fine Finishing Process, Chemical Type AMPs, Electro Chemical Type AMPs, Thermal Type AMPs, and Derived and Hybrid AMPs.



# Course Outcomes

By the end of this course semester, students will be able to

- ❖ Explaining the details of types of advanced manufacturing and machining processes, their evolution and need
- ❖ Identifying the correct advanced manufacturing processes by formulating and determining the correct AMPs for development of various complex shaped geometries
- ❖ Hands on experiments on the Advanced Machines such as EDM, WEDM etc.
- ❖ Design and development of experimental apparatus of any one advanced or derived and hybrid manufacturing process (Team Project). Perform good workplace ethics in completing assigned projects as directed



# Transferable Skills

This course will help students to acquire theoretical and practical knowledge of advancement in the manufacturing industries and develop their skills to solve the critical and complex manufacturing problems. This course will also help in developing the team working during the design and development of experimental apparatus.



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