



# Bhartiya Skill Development University

## Syllabus for Ph.D. Entrance Test

### Automotive

**Introduction:** Reverse engineering fundamentals-The Generic Process-Three phases of Reverse Engineering-Phase I: Scanning, Phase II: Point processing, Phase III: Geometric model development.

**Methodologies and Techniques of Reverse Engineering:** Methods of data acquisition.

**Reverse Engineering Hardware and Software:** Introduction, Reverse engineering hardware, Reverse engineering software, Selection of a reverse engineering system.

**Introduction to Rapid Prototyping:** Basic process, Current techniques and materials, Applications, Relationship between reverse engineering and rapid prototyping.

**Basics of Automobiles:** Engines- cycles, types, efficiency, compression ratio etc. working principle and details of other vehicle aggregates like, brakes, steering, suspension, air conditioning.

Hybrid & Electric Vehicle Technology- alternate methods of power sources in vehicle.