

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY  
BELGAUM, KARNATAKA**



**DESIGN AND FABRICATION OF WHEELCHAIR  
CONVERTIBLE TO BED**  
(Karnataka State Council For Science And Technology Sponsored project)

**A Project Report**

*Submitted in partial fulfilment of the requirements for the award of the degree of*

**BACHELOR OF ENGINEERING**

**IN**

**MECHANICAL ENGINEERING**

**By**

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## **Abstract**

We often find people with physical disabilities, who work in a variety of environments with devices that enable them to overcome their disabilities to a certain extent; however such devices have a few limitations.

This project deals with the design and fabrication of wheelchair convertible to bed, It is also equipped with a standing aid to help the disabled individual to stand up and perform his duties. It involves the use of electrical linear actuators which consists of an assembly of motor driven power screw to make the transformation from sitting to a bed by using a hand held remote, overcoming the need of a another person to shift the patient from wheelchair to bed. This project offers multiple features over a standard wheelchair and is very economical in comparison to commercially available wheelchairs.

Keywords: Design, Actuator, Leg-rest, Back-rest, Bed, Standing Aid.