DEPARTMENT OF MECHANICAL ENGINEERING
NSS COLLEGE OF ENGINEERING,
PALAKKAD - 8

BTECH FINAL PROJECT 2022-23

1. **Project No** :**A102023**
2. **Project Title** :**Design, fabrication and testing of cost effective motorized electric wheel chair convertible bed**
3. **Students Name :**

Register Number	Name	Roll No	Class
NSS19ME010	ADITHYAS	10	S8MA
NSS19ME011	AFRADHUSSIAN	11	S8MA
NSS19ME013	AJAY A	13	S8MA
NSS19ME039	ASWIN R NATH	38	S8MA
NSS19ME048	DHANANJAYPS	47	S8MA

4. **Project Guide** : **Dr. P R Suresh, Dr Vinod V**
5. **Abstract** :

Independent mobilityis important, but some wheelchair users find operating existing manual or powered wheel chairs difficult or impossible. Moreover, the available options for motorized wheelchairs are very expensive. Safe, independent wheelchairs can be useful for people with various overlapping physical, perceptual, or cognitive symptoms of diagnoses such as spinal cordinjury, cerebrovascular accident, multiple sclerosis and cerebralpalsy. Persons with different symptom combinations can benefit from different types of assistance from a smart wheelchair and different wheel chair form factors. To aid these folks and hospital patients, our proposal for this challenge is to develop and create a motorized 2-in-1 affordable wheelchair bed. The bed we are planning to develop is being designed such that it can be changed to any form in between a bed and a chair. The bed also comes with roller mechanism for patient transfer from one bed to another and height adjustment facility to aid users. This enables the user to rest at any position as per his comfort. Also, as the device can be transformed in to a bed from any position, the transition will be easy for the user. We also wantto evaluate several practical and affordable materials in accordance with the need. Using a joystick and buttons, the wheelchair's operation is electrically controlled.

6. **Project Picture :**