



RNS Institute of Technology

(VTU Affiliated, AICTE Approved, NAAC 'A' Grade Accredited)

Dr. Vishnuvardhan Road, Channasandra, RR Nagar Post, Bengaluru – 560098

Department of Electrical and Electronics Engineering

(NBA Accredited for the Academic Years 2018-19, 2019-20, 2020-21 and 2021-22)

Project: Prosthetic Hand

Title	Prosthetic Hand	
Student's name	1RN17EE002	Adarsha. S
	1RN17EE012	Brunda K. S
	1RN17EE013	Chandana.B.R
	1RN17EE030	Rachitha.R
Guide	Mrs. Rashmy Deepak	
Year	2020-21	

People who lose their limbs suffer from psychological and physical difficulties due to their inability to use their extremities. They depend on others for help in their daily activities. On a survey it's has been recorded that there are more than 1 million annual limb amputations globally. In order to provide a quality life with independence and freedom to the amputees for performing their daily activities, prosthesis was developed. Advancement in technology has improved their abilities, independence and overall quality of life. Hence, this project intends towards the development of a real-time flex sensor based Prosthetic Hand to serve amputees. Currently different types of prosthetic arms with different control techniques have been developed and are around the global market. The project involves a glove control technique for the control of the arm motion, where flex sensors are incorporated on the glove to give the gesture input to the prosthetic arm for required motion.

Thus, the results are experimentally validated by measuring real-time variations by phantom mimicking the properties of human hand. Monitoring and control of the rotation of prosthetic arm is therefore demonstrated using glove control and the action is facilitated by the actuators interfaced.

The main purpose of the project is to demonstrate the feasibility of using 3-D printing technology in the design of a low cost, user convenient prosthetic hand for the helping the amputees perform the activities in which the use of both the hands is necessary. It helps the disabled in acquiring the functional replacement for their disabled body part by typically providing supplement to defective body parts.