H.K.E. Society's
Poojya Doddappa Appa College of Engineering
Gulbarga - 585 102.

(An Autonomous Institution, Affiliated to
VTU, Belgaum, and Approved by AICTE)

A
PROJECT REPORT
ON

"MICROCONTROLLER BASED LOW COST CONTROL RECTIFIER TRAINING MODEL FOR POWER ELECTRONICS LABORATORY"

Submitted to the
Poojya Doddappa Appa College of Engineering, Gulbarga
(An Autonomous Institution, Affiliated to VTU Belgaum, and Approved by AICTE)
In partial fulfillment for the award of degree of

BACHELOR OF ENGINEERING
IN
ELECTRICAL & ELECTRONICS ENGINEERING

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CHAPTER 1:

ABSTRACT

The power Electronic Lab is important component of Electrical Engineering curriculum, this project design and implementation of a low cost microcontroller based controlled rectifier training module for single phase system is to be utilized in power electronics lab. Model comprises of various units. The first unit is zero cross dectector followed by the pulse shifting unit, pulse isolation unit, thyristor unit, diode unit, load unit current and voltage measuring unit. Various experiments are designed to study the different configurations of the controlled rectifier. The various configuration includes half convertor, full convertor, dual convertor etc. some types of AC voltage control can also be realized. This system may also be readily extended to study three phase controlled rectifiers in future.