



ADITYA COLLEGE OF ENGINEERING & TECHNOLOGY

Permanently Affiliated to JNTUK, Kakinada, Approved by AICTE, New Delhi

Recognized by UGC Under Section (2f) and 12(B) of UGC Act 1956

Aditya Nagar, ADB Road, Surampalem, 533437

Department of Mechanical Engineering

Project Title:	DESIGN AND FABRICATION OF TRI STAR	
Guide Name:	Miss.T.PRASHANTHI	
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Abstract	PO's Mapping	PSO's Mapping
Transportation of goods like luggage, boxes, gas cylinder etc., from one place to other is our requirements. Generally hand trucks are employed for transportation of goods on the flat surfaces but they fail when the goods are required to be transported on stairs. So human will carry loads on the stairs to carry those loads he will give a more effort . they can carry loads up to some limit only beyond that limit they can't. To overcome this limitation we making a design and fabrication of a cart which can even move on stairs and flat surfaces to carry loads.The heart of the trolley is Tri-Star wheels that enable trolley to transport goods on stairs. In addition it reduces unpleasant movement of trolley on irregular surfaces and stairs .Basic model of trolley is considered and instead of single wheel, 3 wheels are attached to shaft to make rotary motion on steps. For reducing the effort of the human we made a arrangement of motor battery and chain drive .	PO1, PO2, PO3, PO4, PO5, PO6, PO9, PO11	PSO2, PSO3

PO1: Engineering Knowledge	PO5: Modern Tool usage	PO9: Individual & Team Work
PO2: Problem Analysis	PO6: Engineer & Society	PO10: Communication Skills
PO3: Design & Development of solutions	PO7: Environment & Sustainability	PO11: Project Management & Finance
PO4: Investigations on complex problems	PO8: Ethics	PO12: Life Long Learning
PSO1: Mechanical Engineers must be able to analyze, design and evaluate mechanical components and systems using cutting-edge software tools as required by the industries from time to time.	PSO2: The ability to work in manufacturing and other sectors' operations and maintenance plants	PSO3: As part of a team or individually, plan and manage activities in micro, small, medium and large enterprises

Relevance to PO's and PSO's

PO1	Applied the subject knowledge in different trolley mechanism
PO2	Studied and analysed existing Trolley designs
PO3	Design of Stair climbing hand trolley
PO4	Resolve the design problems
PO5	Design the base frame by Solid works
PO6	Testing of Base frame and shaft
PO9	Testing TRISTAR SETUP
PO11	Assembling of all components of TRISTAR
PSO2	climbing trolley is fabricated
PSO3	Entrepreneur skills attained

