

SPIRO PROJECTS



SPIRO

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Research & Development Program (RDP)

Final Year Academic Project (FAP) in Software and Embedded Technologies

Application Development Program (ADP)

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IEEE
PROJECT TITLES GUIDE

2015-2016



TECHNOLOGY: MECHANICAL ENGINEERING

DOMAIN : THERMAL ENGINEERING

S.NO	PROJECT CODE	PROJECT TITLES	APPLICATION
1	ITMT01	Fabrication and testing of refrigeration using engine waste heat.	Vehicle
2	ITMT02	Cyclone separator with blower	Industry
3	ITMT03	Fabrication of miniature boiler	Small scale industry
4	ITMT04	Fabrication of plate freezer	Hotels
5	ITMT05	Waste chill recovery heat exchanger	Ice factory
6	ITMT06	Industrial boiler flame adjustment system	Industry
7	ITMT07	Fabrication of solar air dryer	Industry(tea)
8	ITMT08	Fabrication of three in one air-conditioner	Houses
9	ITMT09	Fabrication of auto air conditioner generator utilizing exhaust waste energy from a diesel engine	Vehicle
10	ITMT10	Fabrication and performance analysis of solar water heater using porous medium and agitator	Houses & industry
11	ITMT11	Solar aided portable vacuum desalination system	Houses
12	ITMT12	Testing and validation of thermo-electric coolers	Houses
13	ITMT13	Design and analysis of stress on thick walled cylinder with and without holes	Industries
14	ITMT14	Fabrication of solar power Hot and Cold Water Dispenser	Houses
15	ITMT15	Augmentation of Saline Streams by Concentrated Solar Distiller with Mini Solar Pond	Industry



TECHNOLOGY: MECHANICAL ENGINEERING

DOMAIN : AUTOMOBILE ENGINEERING

S.NO	PROJECT CODE	PROJECT TITLES	APPLICATION
1.	ITMA01	Power generation by using hydraulic brakes system in automobiles	Vehicle
2.	ITMA02	Electricity Generation from Speed Breakers	Industry & parking vehicle
3.	ITMA03	Air conditioning system by using vehicles suspension	vehicle
4.	ITMA04	Automatic differential locking system	Vehicle
5.	ITMA05	Auto clutch for automobiles	Vehicle
6.	ITMA06	Button operated gear shifting system for two wheeler	Vehicle
7.	ITMA07	Automatic 2-wheeler side stand	Vehicle
8.	ITMA08	Automatic braking and bumper system for automobiles	Vehicle
9.	ITMA09	Modification of exhaust system of 2-wheeler for emission control	Vehicle
10.	ITMA10	Design and application of continuously variable transmission system	Vehicle
11.	ITMA11	Power transmission through timing belt in 2-wheeler	Vehicle
12.	ITMA12	Moulding and fluid flow analysis of wavy fin based automotive radiator	Vehicle
13.	ITMA13	Design and fabrication of shaft drive for bi-cycle	Bi-cycle
14.	ITMA14	Design and fabrication of chain tightening mechanism for two wheeler	Vehicle
15.	ITMA15	Exhaust gas heat recovery for IC engines	Vehicle



TECHNOLOGY: MECHANICAL ENGINEERING

DOMAIN : FABRICATION AND MANUFACTURING

S.NO	PROJECT CODE	PROJECT TITLES	APPLICATION
1.	ITMF01	Fabrication of energy regenerative bi-cycle using fly wheel	Bi-cycle
2.	ITMF02	Fabrication of roll-to-roll fluidic assembly	Industry
3.	ITMF03	Development of non-conventional portable abrasive jet machine	Industry
4.	ITMF04	Coconut tree climbing and cutting machine	Agriculture
5.	ITMF05	Salt water converted to purified drinking water by using pedal power	Houses
6.	ITMF06	Peddalling dress washing machine	Houses
7.	ITMF07	Fabrication of vertical axis and horizontal axis wind turbine	Industry
8.	ITMF08	Involute gear profile detector	Industry
9.	ITMF09	Design and fabrication of Moto autor	Houses
10.	ITMF10	Solar grass cutter with linear blades by using scotch yoke mechanism	Agriculture
11.	ITMF11	Development of solar Fresnel reflector and its tracking stand using local material	Industry & Houses
12.	ITMF12	Wind power mobile charger	Industry
13.	ITMF13	Design and analysis of knuckle joint with replacement of material by using Teflon	Industry
14.	ITMF14	Fabrication of manually operated briquetting machine	Industry
15.	ITMF15	Fabrication of briquette burner	Industry



TECHNOLOGY: MECHANICAL ENGINEERING

DOMAIN : HYDRAULICS AND PNEUMATICS SYSTEMS

S.NO	PROJECT CODE	PROJECT TITLE	APPLICATION
1	ITMH01	Fabrication of Pneumatic belt conveyor	Industry
2	ITMH02	Fabrication of Pneumatic gripper	Industry
3	ITMH03	Air compressor using crank and slotted link mechanism	Industry
4	ITMH04	Modelling of hydraulic wind power transfer utilizing a proportional valve	Industry
5	ITMH05	Sliding control of solenoid valve pneumatic actuators	Industry
6	ITMH06	Hydraulic jack	Vehicle
7	ITMH07	Pneumatic mobile crane	Industry
8	ITMH08	Fabrication of portable slotting machine	Industry
9	ITMH09	Regenerative hydraulic braking system	Vehicle
10	ITMH10	Automatic hydro-pneumatic lubrication system	Vehicle
11	ITMH11	Design and fabrication of pneumatic tricycle	Human
12	ITMH12	Pneumatic time reduction in shaping machine	Industry
13	ITMH13	Pneumatic auto feed punching and reverting machine	Industry
14	ITMH14	Automatic pneumatic ramming machine	Industry
15	ITMH15	Automatic inspection conveyor	Industry



TECHNOLOGY: MECHANICAL ENGINEERING
DOMAIN : AUTOMATION AND MECHATRONICS

S.NO	PROJECT CODE	PROJECT TITLES	APPLICATION
1.	ITMM01	Robotic three finger gripper for unshaped component	Robert
2.	ITMM02	Rough side polished fibre with surface scratches for sensing application	Industry
3.	ITMM03	Real time fuel mileage indicator for motorbikes	Vehicle
4.	ITMM04	Automatic rain operated wiper and headlight dim and dip controller	
5.	ITMM05	Mechanical can crusher automatic feeding mechanism	Industry
6.	ITMM06	Fabrication of over speed indication and automated braking system for automotives	Vehicle
7.	ITMM07	Vehicle ignition using finger print sensor	Vehicle
8.	ITMM08	Automatic work piece counting with belt conveyor	Industry
9.	ITMM09	Automatic double axis welding machine	Industry
10.	ITMM10	Fabrication of quantity based sorting machine	Industry
11.	ITMM11	Sensor operated ramming machine	Industry
12.	ITMM12	Fabrication of automatic railway gate controller	Vehicle
13.	ITMM13	Automatic fault egg sorting machine	Industry
14.	ITMM14	Automatic brake failure and engine overheating alarm	Vehicle
15.	ITMM15	Remote control wheel chair cum bed	Human

3D PRINTING TECHNOLOGY

TECHNOLOGY: MECHANICAL ENGINEERING

DOMAIN : 3D TECHNOLOGY BASED FABRICATION SYSTEMS

S.NO	PROJECT CODE	PROJECT TITLES
1.	IT3D01	3D printed Robotic three finger gripper
2.	IT3D02	Automatic work piece counting Machine using 3D printed components
3.	IT3D03	Double axis welding machine using 3D printed Rack and pinion setup
4.	IT3D04	3D Printing Based Fabrication of quantity based sorting machine
5.	IT3D05	3D printing technology based sensor operated ramming machine
6.	IT3D06	Automatic fault egg sorting machine using 3D printed Components
7.	IT3D07	Wheel chair cum bed Using 3D printed kinematics links
8.	IT3D08	Fabrication of pneumatic tricycle With help of 3D printed sprockets
9.	IT3D09	Pneumatic ramming machine using 3D printed ram tool and support structure
10.	IT3D10	Automatic Pneumatic mobile crane using 3D printed gears, links and hook.
11.	IT3D11	Hydraulic wind power transfer utilizing a proportional valve and 3D printed couplings.
12.	IT3D12	3D printed Pneumatic gripper
13.	IT3D13	Wind power mobile charger using 3D printed wind blades
14.	IT3D14	Solar grass cutter with linear blades by using 3D printed scotch yoke mechanism
15.	IT3D15	Fabrication of energy regenerative bi-cycle using fly wheel and 3D printed Sprockets.

Education Partners:



Technologies and Domain used:

IEEE 2014, Java, J2ee, Android, Dot net, PHP, Embedded, Vlsi, Matlab, VB, Net working, Data Mining, Image Processing, Cloud Computing, Mobile Computing, Multimedia, Network Security, Soft Engg, Grid Computing, Automation, Robotics, Communication, RF, Zigbee, Blue tooth, GSM/GPS/GPRS, Power Electronics & Systems, Electrical, DSP, RTOS, Bio metrics, etc.

Features

- Latest 2014 IEEE, Science Direct, ACM based project concept and solutions.
- State of the art infrastructure, Innovative Project training methods.
- All our efforts are focused on students to meet industry requirements.
- Our environment is encapsulated with doctorates, professionals and other experts.
- Excellent Placements through our **Spiro HR Management Consultants (SMC) Pvt Ltd.**

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