Self-Paced Digital Programs Catalogue - Annexure 2		
S.No.	**Product Name**	**No. of Modules**
1	STEMPlay Powered by Virtual Lab + Complementary (Industry 4.0 + Innovation Life sCycle) Course	1 This project is to demonstrate the power indicators in electronic devices. 2 To demonstrate the function of a simple quiz buzzer. 3 This project is to demonstrate the working of a torch light 4 This project is to demonstrate the working of conveyor belt by using simple DC motor 5 This project is to demonstrate the working of a RGB LED how we can change its light color by our mood. 6 This project is to demonstrate the simple factory siren and its switch 7 This project is to demonstrate the working of torch with slider switch 8 This project is to demonstrate the working of table fan with ON/OFF switch 9 This project is to generate the different rainbow color lights 10 This project is to demonstrate how we control the volume of sound 11 This project is to demonstrate how we control the intensity of LED light 12 This project is to demonstrate the control of the speed of the fan 13 This project is to demonstrate the working of a fridge light 14 The project is to make an security arrangement for museum items by adding do not touch system 15 This project is to demonstrate the working of touch LED 16 This project is design to provide alarm in secured/ prohibited areas from intruders, burglars,etc. 17 The project is design to provide automation of doors on human movement 18 This project is design to sense human presence under debris and save human lives. 19 This project is designed to provide security alarm system for cash boxes in homes, shops, etc 20 This project is designed to switch on the outdoor lighting by sensing the absence of the light 21 This project is designed to auto switch on the windows at day time 22 Though the gas sensor detects many types of gases, this project is designed to sound alarm in houses, hotels etc., for leakage in LPG gas in the kitchen. 23 This project is designed to remove toxic gases from the air in the factories and make the atmosphere healthy 24 This project is designed to indicate by an LED, if the driver of any vehicle is drunk and is not fit for driving and thus protect passengers from fatal accidents.
2	STEMIE (STEM+Innovator+Entrepreneur) Jr Powered by Virtual Lab + Complementary (Industry 4.0 + Innovation Life Cycle) Courses	1 This project is designed for indication system for parking allotment. When a car is parked respective push button is pressed, and when all cars are parked it indicates parking full 2 This liquid level controller comprises of an ultrasonic module interfaced to the Arduino module, which detects precise water level, by reflection coming ahead of it. Whenever distance measured falls below a set point the pump is switched on by sensing the ultrasonic module signal coming out from the Tx sensor being reflected at the water level and received by the ultrasonic Rx sensor, the output of which is fed to Arduino. As per the signal received from the ultrasonic receiver, Arduino switches the pump motor on or off. 3 This project is designed to provide security alarm system for bikes from theft or illegal movement 4 This project is designed to place fragile item in the right direction in transport 5 This project is designed to indicate toll gate barricade position 6 This project is designed to provide security system for museum items from burglary attempt 7 This project is designed to provide security system for homes from theft/intruders from broken fences 8 This project is designed to make a thermometer using Arduino 9 In this project LED indicator changes its color based on change in temperature of liquid in the mug 10 This project is designed to create a stick for a visually impaired person from collision with any object, by sounding the buzzer 11 This project is designed for security system of houses from burglary attempts, by sounding alarm 12 This project is designed to indicate by an LED, if the driver of any vehicle is drunk and is not fit for driving and thus protect passengers from fatal accidents 13 This project is designed for LED blinking as certain indication of vehicles as parked/moving slowly etc. 14 This project is designed to generate rainbow color lighting 15 In this project melody tones of Guitar is generated using Arduino 16 This project is designed to alert people from Hazardous Gas 17 This project is designed to provide security alert system for prohibited areas, containment areas, etc. from intruder 18 This project is designed to provided automation in garage door opening and closing on sensing approaching vehicle through an ultrasonic sensor 19 This project is designed to measure distance using Ultrasonic sensor

		20 This project is designed to provide door automation in malls, offices, hotels etc. on human movement 21 This project is designed to switch on the outdoor lighting by sensing the absence of natural light 22 This project is designed to provide security alarm system for cash boxes in homes, shops, etc. As light falls on sensor, buzzer sounds alarm 23 This project is designed to create a band to alert a person from their habit of touching their face, nose, eyes etc. in pandemic/ undesired situation 24 This project is designed to provide flashing effect of various color LEDs to form dancing LEDs
3	STEMIE (STEM+Innovator+Entrepreneur) Sr Powered by Virtual Lab + Complementary (Industry 4.0 + Innovation Life Cycle) Courses	1 To build a bot which moves in the Left, Right, Forward and Reverse directions on pressing the respective Push Button Switches. 2 To build and programme a bot which moves in the Left, Right, Forward and Reverse directions on pressing the respective Push Button Switches. 3 The project is designed to build an obstacle avoidance robotic vehicle using ultrasonic sensors for its movement. 4 The project is designed to operate robotic vehicle using a TV remote. 5 The project is designed to operate electrical loads using a TV remote. 6 This project is designed to build a robot which can detect Toxic gases in hazardous areas of industries or factories by eliminating any human intervention 7 This project is designed to alert a person from getting close to one another by maintaining social distance on going pandemic using ultrasonic distance measurement system 8 The project is designed to develop a robotic vehicle that follows a specific path. 9 The project is designed to change the color of lights using a TV remote. 10 This project is designed to make a smart fan which works only on human present otherwise not to save the energy 11 In the present manual operation system of highway lighting,unnecessary lights are on in the day time wasting the power. Sometimes in the night also when it is necessary, highway lights are off due to which fatal accidents occur. To overcome this problem we have designed an automation system for highway lighting, in that highway lights are auto switched on in the night by sensing dark and when day breaks they get switched off. In this project we use LDR(Light Dependent Resistor) a light sensor, Arduino and LEDs. 12 This project is designed to alarm other people when any disable person is in need or in panic situation 13 The project is designed to monitor the number of persons entering as well as exiting in a mall by bidirectional visitor counter 14 The project is designed to develop a density based dynamic traffic signal system. 15 This project is designed to operate car wipers automatically by sensing any stuff (like dirt, water) on the car glass 16 This project is designed to automatically open the valves of liquid by sensing density of gases using servo motor 17 This project is designed to make touchless trash can which lid automatically open by sensing any human approach 18 This project is designed to make automatic hand sanitizer dispenser when person bring hand near to the sensor dispenser drops the sanitizer on the hand 19 This project is designed to control window blinds open & close or adjust using TV remote 20 This project is designed to alert people from fire detection and warn by alarming buzzer 21 This project is designed to save energy by adding timer to the water heating geyser. A person can set the time for which water get heated. 22 This project is designed to save energy by adding human detecting sensor. When there is person that time only lights will on otherwise if no human detection lights will get off 23 This project is designed to make a stopwatch using Arduino controller 24 This project is designed to Security of home digital by operating our door lock & unlock based on password entered. The project uses Arduino, LCD and keypad.