# Course Details

**Course Title** - Build your own GPS tracking system-Raspberry Pi Zero W 2019

**Course Subtitle** - Installation, setup & configuration, Static IP, GPS Testing, Remote GUI, location tracking on Google Map, IoT & more

**What you'll learn?**

1) Design your own advanced data streaming and visualization tool to view the detailed tracking information of the moving vehicle.

2) Develop a complete IOT based GPS system to track the real-time movement of the vehicle in the web dashboard.

3) Code in Python and extract the required information from the GPS module.

4) Automate the GPSD to start on boot.

5) Fetch the raw data from the GPS module using the Linux command.

6) Successfully test the GPS module in the windows & Linux environment.

7) Get to know about the working principle of the Global Positioning System (GPS).

8) Set static IP address in the latest Raspbian OS.

9) Access the graphical user interface of the Raspberry Pi without using any external monitor.

10) Install the latest Operating system on Raspberry Pi Zero wireless without monitor, keyboard, and mouse.

11) Perform IP scanning and wirelessly access Raspberry Pi using Putty.

12) Get to know the step-wise comparison between Raspberry Pi Zero Wireless and Raspberry Pi 3.

13) Detailed knowledge about the Raspberry Pi Zero Wireless and its previous versions.

**Requirements**

- Basic knowledge of any programming language.
- The course is crafted from basic to advanced level, so even if you new to Raspberry Pi, the course will help you to get up & running.

**Course Description**

Learn to build a fully functional GPS tracking system from scratch. I have always been a firm believer in learning by doing and in this course, you will learn what you need to know by hands-on experience. You don't need any special knowledge except basic computer skills to get started with the course. Every one of you comes from a different background and hence; the course is crafted from basic to advanced level with minute detailed in every lecture.

The course is divided into 7 sections. In the first section, you will learn about the latest version of Raspberry Pi Zero Wireless in detail, its specifications and how it differs from its previous versions.

In the second section, we will begin with installing the latest version of the OS without the help of any external monitor. We will make the IP address static to remotely access the terminal and the graphical user interface without using any IP scanner tool.

In the third section, we will get to know about the project concept and the working principle of the Global Positioning System. We will then learn how to test whether the GPS module is functioning or not.

The fourth section begins with the different set of Linux commands to access the GPS functionality on the terminal and how to automate the Linux daemon to start on boot.

The fifth section takes you to the intermediate level where you will get to know about the GPS data extraction and programming using Python. We will code in python to fetch the GPS coordinates and other relevant details which will keep updating in seconds.

In the sixth section, you will come to know how IoT is the game changer. We will design our own dashboard and analyze the data in real time from anywhere. You can track the current position of the vehicle or the school going children in the google map using the mobile app or the web dashboard.

The seventh section exposes you to another advanced IoT dashboard tool where we will write our own code to analyze the GPS data in the more enhanced way. We will get to know the complete address where the vehicle is located in real time and monitor its status.

Please note that the project covered in the course will work on any version of the Raspberry Pi. Only to keep the project development cost down and to embed the circuit anywhere we are primarily targeting Raspberry Pi Zero Wireless board.

All the lectures contain English subtitles for clear and better understanding. If you face any technical issue, please post your query in the question and answer section and I will get back to you within 1 business days. Alternatively you can also drop an email at - support@comfiny.com

At the end of the course, you will have a solid foundation on navigation system. You will find it easy to build your own device from scratch.

**FAQ**

**1) I am new to Raspberry Pi, Can I do this course?**

The course first teaches how to install and setup Raspberry Pi and then the projects starts.

**2) I have Raspberry Pi 3, can I do this course?**

Of-course Yes!! The project can be completed on any version of Raspberry Pi.

**3) What if I get stuck and need technical help?**

We cover one business day resolution to all your technical queries. If you don't understand something, please post your query in Q & A section and we will get back in 24 hours.

Still have doubts, feel free to drop a mail at - support@comfiny.com