

## Project CODE Class

Project CODE Class is the culmination of a several year project developed by Lisa Philpott and Tim Sayre to help folks learn things using computers. It stands for computer oriented developmental education. In a nutshell, it is using computers to learn things. There is a website at <http://codewv.org> with an in-depth explanation of the process and a page with links to websites that provide free training for a variety of things. We started the project as a way of giving back to the community and for about three years we had a weekly class at the Economic Development Center (EDC) in Charleston where anyone was free to come in and learn things. We also had a few laptops for those who didn't have one. In March 2020, the EDC closed due to COVID so we couldn't conduct the class.

In March 2022, I almost died due to complications from surgery. During my stay in the SICU, I had an experience which convinced me to convert to Catholicism. I learned there are things that we are expected to do and one of them was to visit the imprisoned. All of the rest were fairly straight forward, like feeding the hungry, clothing the naked, and housing the homeless. While talking to Lisa, the words surprised me as I said I was going to start a program to take to a prison.

After discussing it with a few friends and colleagues, the idea evolved from that into a complete training program to teach folks in prison how to work at a technical support help desk. Since I had all the material gathered and an idea outlined already, it didn't take much modification to turn it into a three day weekly program for a year that covers how to go from no background in technology to fixing computers. The outline covers a 52 week program which consists of one hour of instruction daily three days per week.

## Learn How To Think

- I. Introductory content. 6 hrs
  - A. Expectations.
  - B. How the brain works.
  - C. How to correct the mindset.

## Basic Electronics

- I. How electricity works. 3 hrs
  - A. Theory.
  - B. Practical usage.
- II. Components. 6 hrs
  - A. Wire.
  - B. Resistors.
  - C. Transistors.
  - D. Capacitors.
  - E. Diodes.
  - F. Transformers.
  - G. IC (integrated circuit) chips.
  - H. FETs and MOSFETs.
  - I. Miscellaneous components.
- III. Safety. 2 hrs
  - A. Safety around electricity.
  - B. Safety around the workshop.
  - C. Proper grounding techniques.
  - D. Dangerous equipment.

## Computers

- I. Basic composition. 5 hrs
  - A. Motherboard.
  - B. CPU.

C.	Memory.	
D.	Video.	
E.	Sound.	
F.	Network connection.	
G.	USB.	
H.	DVD/CD drive.	
I.	Hard drive.	
J.	Power supply.	
K.	Peripherals.	
II.	Operating systems.	5 hrs
A.	BIOS	
B.	Windows.	
C.	Apple	
D.	GNU/Linux.	
E.	Miscellaneous.	
III.	File structure.	5 hrs
A.	Windows file structure.	
B.	Apple file structure.	
C.	GNU/Linux file structure.	
IV.	Scripting.	5 hrs
A.	Windows scripting.	
B.	Apple and GNU/Linux scripting.	
C.	Python scripting.	
D.	HTML and CSS.	
V.	Error logs.	6 hrs
A.	Windows error reporting.	
B.	Apple error reporting.	
C.	GNU/Linux error reporting.	
VI.	Software installation.	3 hrs
A.	Windows software installation.	

- B. Apple software installation.
- C. GNU/Linux software installation.
- D. Compiling software from source code.

## Networks

- I. Material 2 hrs
  - A. What it's made of.
  - B. How it works.
- II. Topology. 2 hrs
  - A. Different types.
  - B. How they work.
- III. Equipment. 4 hr
  - A. Routers.
  - B. Switches.
  - C. Modems.
  - D. Access points.
  - E. Antennas.
- IV. Protocols. 8 hrs
  - A. OSI model.
  - B. Protocols.
- V. Routing. 9 hrs
  - A. LAN.
  - B. WAN.
  - C. Backbone.
  - D. SD-WAN.
  - E. Protocols.

## Cloud and Virtualization

- I. The cloud. 6 hrs
  - A. Types of cloud computing.

- B. Using server space in a data center.
- C. Maintaining security and availability of data.
- D. 3d party monitoring and service providers.

II. Virtualization. 6 hrs

- A. Sandboxing.
- B. Virtual environments.
- C. Virtual machines.
- D. Docker images

#### Troubleshooting

I. Basic troubleshooting techniques. 8 hrs

- A. Starting point.
- B. How to proceed effectively.
- C. Knowledge base library.
- D. Effective internet searches.
- E. Google dorks.
- F. Flowcharts and bubble diagrams.

II. Record keeping strategies. 8 hrs

- A. Note taking programs.
- B. Effective note taking.
- C. Organization of notes.
- D. Using your notes effectively.
- E. Creating your own knowledge base library.

#### Customer Service

I. Effective communication. 8 hrs

- A. Proper terminology.
- B. Proper language.
- C. Establishing a rapport.

- II. Engaging with the customer. 7 hrs
  - A. Confrontational customers.
  - B. Older customers.
  - C. Non-technical customers.

#### Training

- I. Practical exercises 12 hrs

#### Employment Preparation

- I. Resume building. 9 hrs
- II. Interviewing techniques. 9 hrs
- III. Workplace interactions. 6 hrs

#### Course Wrap Up

- I. Additional time for anything necessary for completion. 6 hrs

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