



Education within the reach of all
A Ministry of Calvary Chapel-Port-au-Prince
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Syllabus

Course Title

OPERATING SYSTEM

I. Introduction:

- In this course, you will learn how a computer operates at the hardware level (Hardware) and how to write software to directly manage this hardware.
- You will learn the basics of operating systems, enabling you to adapt to any operating system, not just Linux.
- You will write a simple operating system: bootloader and a simple kernel.

II. Course Outline:

Review of Linux commands

Review of Assembler Programming using NASM

Review of C Programming

Structure of an executable file - ELF Format

Structure and Implementation of a Bootloader

Structure and Implementation of a Kernel

References:

- "Operating Systems: From 0 to 1" by Tu, Do
- OSDev Wiki Tutorials (<https://wiki.osdev.org/Tutorials>)
- NASM (Netwide Assembler) website (<https://www.nasm.us/>)

Tools on Linux:

- Emulator: `sudo apt install qemu`
- NASM: `sudo apt install nasm`