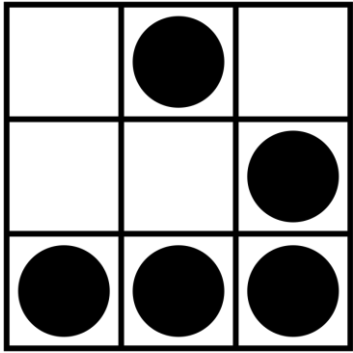


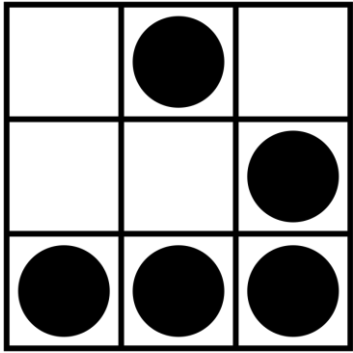
# How to Teach Hacker Highschool: Unit 2



# How to Teach Hacker Highschool

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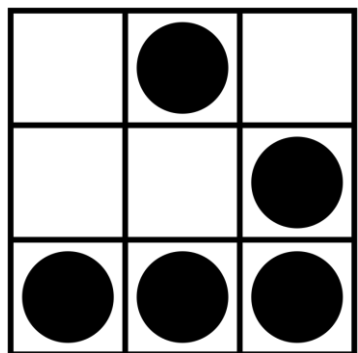
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If you would like to  
follow the slides...

Download the  
presentation  
below!

# How to Teach Hacker Highschool: Unit 2



## School for Hackers Teaches:

ISECOM'S Hacker  
Highschool

Hacking 101

Hacker Night School

EC-Council's Certified  
Ethical Hacker (CEH)

# How Long Should HHS Run?

HHS is designed to be flexible, and can be run as:

- A traditional 16-week semester class
- A weekly “club” activity
- A “boot camp”

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## Semester Format

- 1-3 hours per week
- 1 lesson per week
- Use remaining weeks to set up student computers, build and use your own “hack lab” or learn to use online hacking sites, and practice actual security testing
- Final project and/or exam

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## Club Format

- 1-2 hours per week for meetings
- 1 lesson per week
- Lessons can be skipped
- Setting up virtual machines and a Hack Lab can be an ongoing project

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## Boot Camp Format

- Usually 4 hours per day is the most students can concentrate
- 1-2 lessons per day
- 5 days
- End with a session of testing on online hacking sites or your local hacking lab

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How you should read lessons,  
and how students should read  
lessons.

Be willing to read through lessons quickly,  
jumping around and skipping sections as needed.

Don't try to do every exercise the first time  
through.

Do turn to the Internet when you want to know  
more.



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What kind of classroom will you  
need?

**Preferably 1 computer per student running  
Windows or Mac (more is always nice)**

**It IS perfectly feasible to share computers.**

**In regions where Linux, for instance Ubuntu, is  
common, that works perfectly well also.**

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What kind of computers will  
you need?

You can do it with nothing but cheap used PCs.  
In fact, if you are using the club format, creating  
a network of Windows and Linux computers will  
be part of the fun.

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What kind of computers will  
you need?

If you're using cheap, donated equipment,  
consider setting up a Windows and a Linux  
machine for each student.

Or have them set the computers up.

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What kind of computers will  
you need?

It's nice to have a laptop for every student.

Some schools can do this and some can't.

But it is highly feasible to ask for donations.  
Major organizations like Intel will help, and  
smaller local organizations often have used  
equipment to donate.

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What kind of computers will  
you need?

It's even nicer to have student laptops with at least 2 gigabytes of RAM.

Generally, computers with 2GB can run Windows and 1 Linux virtual machine.

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What kind of computers will  
you need?

Maximally nice is one hot-rod computer, whether a server or a laptop, with 8-16GB of RAM, to run one or more “victim” VMs for students to test.

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## Virtualization

**“Virtualization” sounds kind of abstract, but actually it's pretty simple.**

**It means running more than one OS – more than one “computer” - on a physical PC at the same time.**

**We will discuss it in more detail as we go.**

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Which OS will you need?

Linux is the platform of choice. You can do much more on it than Windows.

“Hackers use Linux, victims use Windows.”

Don't worry: you don't need to be a master of Linux.

Ideally, each student will have their own Linux computer, real or virtual.



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What kind of network will you need?

- Optimally, Internet access, wired rather than wireless
- You CAN run HHS without Internet access

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What kind of network do you need?

- A wired local area network only, or
- A wireless local area network only (with no Internet), or
- A wired network with Internet access,
- But DON'T try to use your school's public wireless network plus Internet access: wireless computers "fight" each other for bandwidth, but wired computers don't.

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## Using a Local Network Only

You can run HHS with nothing but a local network connection, in other words, no Internet at all.

A simple wired network switch with all computers attached works fine.

A wireless access point also works fine, as long as it's NOT connected to the Internet.

Actually, this is a very safe way to run HHS, but it does require you to provide your own “victim” computers.

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## Using a Wireless Local Network Only

**This actually works well, as long as you have no more than ~10-15 students (your mileage will vary).**

**You will likely max out your wireless network when students are scanning, so be polite and use a different channel than your school's wireless!**

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## Providing Victims

**“Victim” computers are nice. They give your students safe targets, and let them sharpen their skills for real-life incident response.**

**You can certainly set up physical or virtual victims, depending on what hardware is available.**

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## Open Testing Targets

There are lots of online resources:

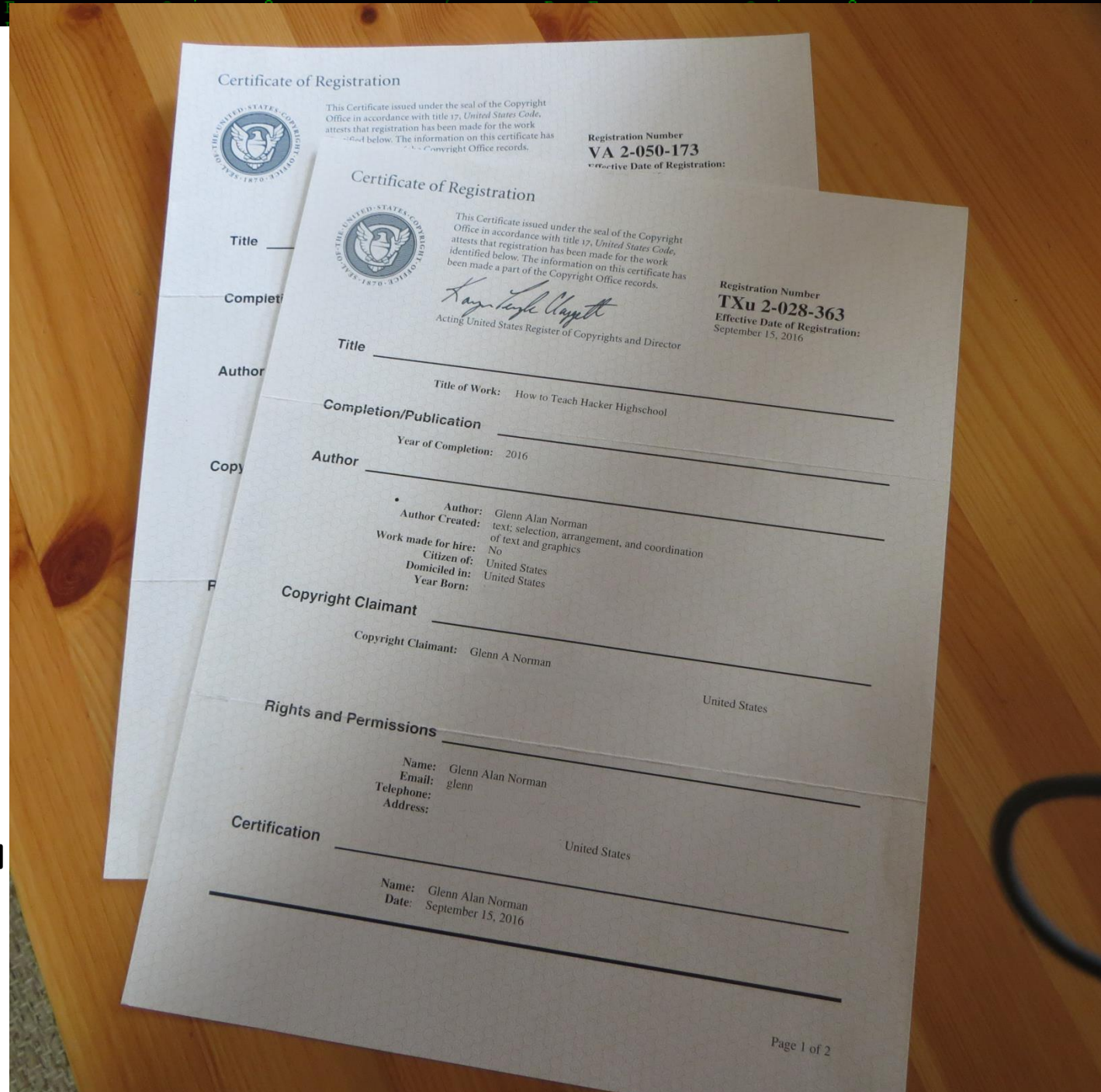
<https://www.hackthissite.org>

<https://www.root-me.org/>

<http://scanme.nmap.org/>

Note that anything beyond modest scanning activity on other sites may attract unwanted attention.

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