

C-54 Hometech Curriculum

Heating, Mining, and Home Automation

- Week 1
 - Why mine bitcoin?
 - Secures the Bitcoin network
 - 51% attacks
 - State of bitcoin mining pools
 - Geography of bitcoin mining pools
 - Stable Energy
 - Texas
 - Africa
 - Verunda
 - Ethiopia and GERD
 - Mini-grids
 - Profitable
 - Subsidy
 - Fees
 - Costs
 - Hardware
 - Electricity
- Week 2
 - Pools
 - Why pools in the first place?
 - Solo mining
 - Economics of pools
 - How to pick a good pool?
 - Decentralization
 - Censorship
 - Payout structure
 - PPS, PPS+, LNPPS, FPPS
 - Getting setup with a pool
- Week 3
 - Running an ASIC
 - Basic electrical info
 - What is a circuit?
 - 120V vs 240V
 - AC vs DC
 - What do watts and amps measure?
 - Setting up a machine
 - Connecting to a pool
 - Basic configuration
 - Basic troubleshooting
- Week 4
 - Energy costs
 - Calculating real electric costs
 - Heat recycling
- Space heaters
- HVAC
- Food Dehydration/Warming
- Clothes Drying
- Brainstorming new ideas
- Intro to immersion and hydro mining
- Week 5
 - 3d printing
 - Basics
 - Heating duct shrouds
 - Fan adapters and stands
 - Brainstorming new ideas
- Week 6
 - Setting up a Raspberry Pi
 - What is a Raspberry Pi?
 - Hardware and configuration
 - Intro to Linux
- Week 7
 - Running a server
 - What is a server?
 - Umbrel and StartOS
 - Running a bitcoin node
 - Node implementations
 - Basic configurations
- Week 8
 - Home Automation
 - Home Assistant
 - Local vs remote control
 - HASS-miner
- Week 9
 - Running a lightning node
 - Opening channels
 - Configuring channels
 - Sending payments and liquidity
- Week 10
 - DATUM
 - OCEAN pool
 - Block templates
 - Lightning payouts