Course Outline: (tentative)

1. Linux Basics
   - GUI: X11, KDE, Gnome, etc.
   - CLI: shells, key commands
   - OS basics: root, UIDs, GIDs, filesystem, processes, signals

2. Linux Distribution Selection, Installation, and Configuration
   - Preparation: network settings, hardware, disk partitioning, backups
   - Boot loaders and booting multiple OSs
   - Installation: settings, software, services
   - Configuration: distribution tools, initial settings, network
   - Basic security: services, permissions, tcpwrappers, etc.

3. System Maintenance
   - Software installation: compiling from source vs. packages
   - Software updating/patching
   - System monitoring and log files
   - Backups
   - Kernel compilation

4. Overview of Computer Security Issues
   - Software bugs (buffer overflows, format string bugs)
   - Privelage escalation
   - Passwords, users/groups, and permissions
   - Networking basics
   - Footprinting, scanning, OS detection, and enumeration
   - Network attacks and services
   - Denial-of-service attacks

5. System Security Measure
   - Security scanners
   - Firewalls
   - Port scanning
   - Scan detectors
   - Log file assessment
   - Intrusion detection systems
   - Server configuration/hardening

6. Encryption
   - Encryption basics
   - Tools: SSH, SSL, GPG/PGP

7. Servers and services
   - remote access (e.g., SSH, FTP, Telnet)
   - file/print sharing (e.g., NFS, Samba, CUPS)
   - mail and web (e.g., Sendmail, Apache, Tomcat,)
   - authentication (e.g., NIS, LDAP)
   - DNS (Bind)
   - database (mySQL, PostgreSQL)