This week in CSCI 019 network class we learned about different types of cabling and their uses.

1. Learned about
   1. frequency bandwidth and throughput
   2. Transmission flaws
      1. EMI (electromagnetic interference)
      2. Cross-talk
         1. Alien cross-talk
         2. Near end cross-talk (NEXT)
         3. Far end cross-talk (FEXT)
      3. Attenuation
      4. Latency
      5. RTT
   3. Transmission types
      1. Full-duplex
      2. Half-duplex
      3. Simplex
      4. Multiplexing
         1. Multiplexer (mux)
         2. Demultiplexer (demux)
            1. TDM (Time division multiplexing)
            2. STDM (statistical time division multiplexing)
            3. FDM (Frequency Division Multiplexing)
         3. WDM (Wavelength Division Multiplexing)
         4. DWDM (Dense Wavelength Division Multiplexing)
         5. CWDM (Coarse Wavelength Division Multiplexing)
   4. Cable types
      1. Coaxial cable (coax)
      2. Twinaxial cable (twinax)
      3. Twisted-Pair cable
         1. UTP
         2. STP
   5. Cable Pinouts
      1. TIA/EIA 568A
      2. TIA/EIA 568B
         1. Straight-through cable (patch cable)
         2. Rollover cables (console cables)
   6. PoE (Power over Ethernet)
      1. 15.4 watts for standard
      2. 25.5 watts for newer
      3. PSE
      4. PDs
   7. Fiber-optic Cables
      1. SMF
      2. MMF
         1. Fiber connectors
            1. UPC (Ultra Polished Connector)
            2. APC (Angle Polished Connector)
   8. Media Converters
   9. Fiber Transceivers
      1. SFP (small form-factor pluggable)
      2. XFP (10 Gigabit small form-factor pluggable)
      3. SFP+
      4. QSFP (quad small form-factor pluggable)
      5. QSFP+
      6. CFP (centum form-factor Pluggable)
   10. Common Fiber-Cable Problems
       1. Fiber type mismatch
       2. Wavelength mismatch
       3. Dirty connectors
       4. Link loss
   11. Toner and probe kits
   12. Multimeters
   13. Cable Continuity Testers
   14. Cable Performance Testers
       1. TDR (time domain reflectometer)
       2. OTDRs (optical time domain reflectometers)
   15. OPM (Optical Power Meters
2. Punch down tools
   1. 66 format cables (voice)
   2. 110 format cables (data)