1. Addition and binary subtraction
2. Propagation time delay $t_{PD}$, $t_{PHL}$, $t_{PLH}$
3. Gate cost
4. Sequential circuit design, state table and diagram
5. Binary counter design (block BCD counter with external logic)
6. Register transfer, microoperations
7. Multiplexer-based transfer
8. Bus-based transfer
9. Register design
10. Verilog HDL