Plan

Synchronous Circuit

- Combinational Circuit
- Sequential Circuit
- Digital Watch

Binary Algebra

- Boolean Algebra
- Binary z^- Transform
- 2-adic Numbers

Electronic Circuit

- Transistor
- Silicon Process
- MOS Structures

Silicon Arithmetic

- Counters
- Adders
- Multipliers

Universal Machines

- Microprocessor
- Programmable Logic
- Computable Functions

Digital Physics

- Heat Equation
- Radiation Detector

Information Theory

- Shannon's Theory
- Entropy Coding
- Error Coding

Audio & Video

- CCD Camera
- MPEG Compression
- Half Toning

Digital Systems VI – Jean.Vuillemin@ens.fr