Eleves 2009-10

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Raise Your Hand!

**Foreign students**

1. *Never hesitate to raise your hand when don’t understand the meaning.*
2. *Rather than a waste of time, it is a pedagogical tool!*
   - Repeat in English improves understanding of concept - for all.
   - ENS students below EU average at TOEFL scores.
3. *Science concepts orthogonal to human languages.*
4. Practice your French at ENS. It’s an asset for your future.

**Live questions:**

1. *Americans do. Asians don’t. ENS sits between.*
2. *Never hesitate to raise your hand: when you’re lost, or ahead, or elsewhere.*
3. *Questions make the difference between a CD Course and a Real one.*
4. Practice your English at ENS. It’s an asset for your future.

**All students**

1. *Same-same for all.*
2. *Practice your English before losing your gift of tongue.*
3. *No point to remain shy: communicate! With all around.*
4. *English is our common work language! Good or bad, like it or not.*

**Meet teachers**

1. *Same-same for all.*
2. *Ask by email. I choose between 3 convenient times for you.*
3. *Lunch as reward?*
Teaching Language for Information & Communication Science & Technology

IC Science
1. Understand when two sets of words describe the same Concept.
2. Reduce all to a few Key Concepts by composition.
4. Publish in English, for the whole world to be able to read.

IC Industry
1. Phenomenal sustained growth through 50 years of Standards.
2. Lead Standard’s Committees to your patents (e.g., xor cursor).
4. Publish Standards in English, for the whole world to be able to reproduce.

IC Education
1. Adopting common words for important new concepts takes time.
2. It happens in English years before local translations become common.
3. Teaching IC Key Concepts is far easier in English than in any other language.
4. English is the language in which you will have to communicate your best work!
Digital Systems

Synchronous Circuit
- Combinational Circuit
- Sequential Circuit
- Digital Watch

Binary Algebra
- Numerations
- Binary Algebra
- BDD

Electronic Circuit
- Transistor
- Silicon Process
- MOS Structures

Silicon Arithmetic
- Counters
- Adders
- Multipliers

Universal Machines
- Microprocessor
- Programmable Logic
- Computable Functions

Digital Physics
- CCD Camera
- Radiation Detector
- Heat Equation

Information Theory
- Shannon’s Theory
- Entropy Coding
- Error Coding

Audio & Video
- Digital Audio
- JPEG Compression
- Half Toning
Languages

Course Notes
1. Reference text in French - bad mistake on my part (amend within 2 years?).
2. All slides in English. All accessible (updated within time lag) through the web.

Projects
1. All presentation slides in English.
2. Language up to the presenter: French or English.

Lectures
1. So far in French.
2. Can switch to English.
3. Requires unanimous vote: Loi Toubon oblige!