

Elevés 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.***
3. ***Discover new Key Concepts.***
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).***
3. ***Standards disclose Concepts in words (text /pictures) with deepest details.***
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

Universal Machines

- Microprocessor
- Programmable Logic
- Computable Functions

Binary Algebra

- Numerations
- Binary Algebra
- BDD

r

Digital Physics

- CCD Camera
- Radiation Detector
- Heat Equation

Electronic Circuit

- Transistor
- Silicon Process
- MOS Structures

Information Theory

- Shannon's Theory
- Entropy Coding
- Error Coding

Silicon Arithmetic

- Counters
- Adders
- Multipliers

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 !*

