

EE-490(d)

**Lab in microelectronics**

Décurnex André

Cursus	Sem.	Type
Electrical and Electronical Engineering	MA1, MA3	Opt.
Mineur STAS Chine	H	Opt.

Language of teaching	English
Credits	4
Withdrawal Session	Unauthorized Winter
Semester Exam	Fall During the semester
Workload	120h
Weeks	14
<b>Hours</b>	<b>4 weekly</b>
TP	4 weekly

**Number of positions**

**It is not allowed to withdraw from this subject after the registration deadline.**

**Summary**

Study of some useful circuits mainly in telecommunication systems.

**Content**

A-D and D-A Conversion  
 Modulation & Demodulation  
 PLL  
 Initiation to HF Electronics  
 SSB Transmitter or Receiver

**Learning Prerequisites****Recommended courses**

Circuits et Systèmes Electronique II  
 Techniques HF & VHF

**Learning Outcomes**

By the end of the course, the student must be able to:

- Choose a type of circuit suiting the needs
- Dimension the circuit
- Optimize a circuit in case of conflicting requirements
- Transcribe results in a written report

**Transversal skills**

- Assess progress against the plan, and adapt the plan as appropriate.
- Communicate effectively, being understood, including across different languages and cultures.

**Teaching methods**

Practical Lab Work in team of two students

**Expected student activities**

Calculate components values  
Detailed Analyzis of Performances  
Writing a report of results

**Assessment methods**

Evaluation of the report

**Supervision**

Office hours	Yes
Assistants	No
Forum	No

**Resources****Bibliography**

Course Circuits et Systèmes Electronique II  
Course Techniques HF & VHF

**Ressources en bibliothèque**

- [Circuits et Systèmes Electronique II / Declercq](#)
- [Techniques HF & VHF / Enz](#)

**Moodle Link**

- <http://moodle.epfl.ch/course/view.php?id=7501>