











ELECTRONICS_S8_MIN Spring Semester Graduate	Electronics as a minor S8	4 credits Lab: 37.5% Final exam (3h): 62.5%
Prerequisite: S5-S7 Electronics lectures		



DEP_2311	Analog modulations & Noise	Language   
Lecture: 6	Tutorials: 6	Lab work: 8
<p>This course allows the study of signal transmission, in its analog aspect.</p> <ul style="list-style-type: none"> - Noise - Amplitude modulation - Frequency modulation 		

DEP_2312	Electromagnetic Compatibility, Signal Integrity	Language   
Lecture: 8	Tutorials: 10	Lab work: 8
<p>This course focuses on different electromagnetic interferences and their effects on electronic systems, especially the signal integrity issues and power (crosstalk, electromagnetic interferences, overshoot, multiple reflection, signal skew...). The idea is to make students aware of these issues as soon as the design of the circuit.</p> <ul style="list-style-type: none"> - Definitions and rules specific to Electromagnetic Compatibility - Electromagnetic interferences. Classification by origin, time, spectrum, coupling type (conduction, , both), differential and common propagation mode, frequency and time characterization. - Coupling mechanism in harmonic state and transient state. - Screening effect - Devices and specific methods of EC protection 		

ELECTRONICS_S8_MAJ Spring Semester Graduate	Electronics as a major S8	6 credits Lab: 41.7% Final exam (3h): 58.3%
Prerequisite: S5-S7 Electronics lectures		

DEP_2311	Analog modulations & Noise	Language  
Lecture: 6	Tutorials: 6	Lab work: 8
Same as minor.		

DEP_2312	Electromagnetic Compatibility, Signal Integrity	Language  
Lecture: 8	Tutorials: 10	Lab work: 8
Same as minor.		

DEP_2316	Electronic System III	Language  
Lecture: 10	Tutorials: 10	Lab work: 16
<p>This lecture shows some applications, from the analog point of view, systems and associated devices. Simulation tools will be used in tutorials and lab.</p> <ul style="list-style-type: none"> - Link budget of radio or wired links. Electronic labels. RFID. Contactless charger. - Atomic clock, phase noise. GPS system. 		