

ENG-606(a) **Design of experiments (a) - Fall semester**

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Cursus	Sem.	Type
Advanced Manufacturing		Obl.
Civil & Environmental Engineering		Obl.
Energy		Obl.
Mechanics		Obl.
Robotics, Control and Intelligent Systems		Obl.

Language of teaching	English
Credits	4
Session	
Exam	Project report
Workload	120h
<b>Hours</b>	<b>56</b>
Courses	20
TP	36
<b>Number of positions</b>	<b>50</b>

**Remark**

Block course Fall 2019 (including a 2 days optional pre-course on Matlab)

**Content****Experiment analysis and planning****Treatment of qualitative factors**

- Inference of constant and random coefficient models
- Graeco-latin squares design
- Balanced bloc design
- Analysis of variance (Anova)

**Treatment of quantitative factors**

- Empirical models
- Matricial treatment of the multilinear regression
- Analysis of non-orthogonal estimators
- Analysis of variance

**Standard designs for first and second degree models**

- Hadamard, factorial, fractional factorial designs
- Normal and half normal
- Composite, Doehlert and Box Behnken design
- Canonical analysis