

CIVIL-706

**Advanced Earthquake Engineering**

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<b>Cursus</b>	<b>Sem.</b>	<b>Type</b>
Civil & Environmental Engineering		Opt.

Language of teaching	English
Credits	2
Session	
Exam	Oral
Workload	60h
<b>Hours</b>	<b>28</b>
Courses	22
TP	6
<b>Number of positions</b>	

**Frequency**

Every 3 years

**Remark**

Next time: Spring 2021 Min. 6 persons

**Summary**

This course deals with the complex problem of seismic evaluation of existing structures; by far more complicated than for new structures. Aims are to: - show how and why the analysis methods need improvements to be used in this context. - provide an insight of the different retrofitting methods.

**Content**

- Particularity of existing structures in seismic context
- Vulnerability and seismic evaluation
- Analysis methods
- Strength and displacement based evaluation
- Retrofitting methods (design and technology)

**Resources****Websites**

- <https://www.epfl.ch/labs/imac/fr/enseignement/advanced-earthquake-engineering/>