

ENV-614

**Fourier analysis and boundary value problems**

Rinaldo Andrea

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

Language of teaching	English
Credits	4
Session	
Exam	Written
Workload	120h
<b>Hours</b>	<b>56</b>
Courses	28
Exercises	28
<b>Number of positions</b>	

**Frequency**

Every year

**Remark**

Every year/ Next time, Spring 2018

**Summary**

Learning Fourier Series and Boundary Value Problems with a view to a variety of science and engineering problems. Learn the use of special functions like Bessel functions and applications. Introduce the doctoral students to general Sturm-Liouville problems and applications.

**Content**

Textbook: J.W. Brown, R.V. Churchill, *Fourier Series and Boundary Value Problems*, McGraw Hill, 7th ed, 2008

Fourier Series; Convergence of Fourier Series; Partial Differential Equations of Physics; The Fourier Method; Boundary Value Problems; Fourier Integrals and applications; Orthonormal sets; Sturm-Liouville problems and applications; Bessel functions and applications.

**Learning Prerequisites****Required courses**

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