



## INTRODUCTION TO SCIENTIFIC COMPUTING FOR ENGINEERS

<b>Enrollment year</b>	2015/2016
<b>Academic year</b>	2016/2017
<b>Regulations</b>	DM270
<b>Academic discipline</b>	MAT/08 (NUMERICAL ANALYSIS)
<b>Department</b>	DEPARTMENT OF CIVIL ENGINEERING AND ARCHITECTURE
<b>Course</b>	CIVIL AND ENVIRONMENTAL ENGINEERING
<b>Curriculum</b>	PERCORSO COMUNE
<b>Year of study</b>	2°
<b>Period</b>	1st semester (26/09/2016 - 13/01/2017)
<b>ECTS</b>	12
<b>Lesson hours</b>	120 lesson hours
<b>Language</b>	Italian
<b>Activity type</b>	WRITTEN AND ORAL TEST
<b>Teacher</b>	GUGLIELMANN RAFFAELLA - 6 ECTS PAVARINO LUCA FRANCO - 6 ECTS
<b>Prerequisites</b>	-
<b>Learning outcomes</b>	Acquisition of the basic numerical methods for scientific computing
<b>Course contents</b>	<ul style="list-style-type: none"><li>- Introduction to scientific computing</li><li>- Function zero finding</li><li>- Polynomial interpolation and least square methods</li><li>- Numerical quadrature</li><li>- Numerical linear algebra, eigenproblems, direct and iterative methods for linear systems</li><li>- Numerical methods for ordinary differential equations</li></ul>
<b>Teaching methods</b>	Frontal lectures + Matlab sessions
<b>Reccomended or required</b>	-

**readings**

**Assessment methods**

Midterm exam + final written exam

**Further information**

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**Sustainable development  
goals - Agenda 2030**

[Sbl legenda sviluppo sostenibile](#)