

## TEMPLATE FOR MODULE/COURSE DESCRIPTION

**ORLANDI ANTONIO**

The Template consists of a title field and four sections.

Programme of "Elettrotecnica": "Electrotechnics" or "Basic Electric Principles"		
<ul style="list-style-type: none"> <li>• Code: I0536</li> <li>• Compulsory</li> <li>• 1<sup>st</sup> cycle; 2<sup>nd</sup> year; 1<sup>st</sup> semester</li> </ul>		
<b>Number of ECTS credits: 9 (workload is 225 hours; 1 credit = 25 hours)</b>		
Teacher: <b>Prof. Antonio Orlandi</b>		
<b>1</b>	<b>Course objectives</b>	The goal of this course is to provide the basic electric principles for the solutions of static electric, magnetic and current field and of circuit problems.
<b>2</b>	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p>Topics of the module include:</p> <ul style="list-style-type: none"> <li><b>Electric field</b></li> <li><b>Magnetic field</b></li> <li><b>Current field</b></li> <li><b>Circuit theorems</b></li> <li><b>Circuits in DC</b></li> <li><b>Circuits in AC</b></li> <li><b>Three-phase circuits</b></li> <li><b>Transient circuits in time and Laplace domain</b></li> </ul> <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> <li>- have profound <b>knowledge</b> of field and circuit theory</li> <li>- have <b>knowledge and understanding</b> of the basic electric principles</li> <li>- <b>understand and explain</b> the physical mechanisms of electric and magnetic fields</li> <li>- <b>demonstrate skill</b> in problem solving and <b>ability</b> to solve electric/magnetic fields and circuits problems</li> <li>- demonstrate <b>capacity</b> for reading and understand other texts on related topics.</li> </ul>
<b>3</b>	<b>Prerequisites and learning activities</b>	The student must know the contents of the courses of Calculus and Physics
<b>4</b>	<b>Teaching methods and language</b>	<p>Lectures, exercises, home work,</p> <p><b>Language:</b> Italian / English</p> <p><b>Ref. Text books</b></p> <p>Notes of the Teacher</p> <p>M. D'Amore, Elettrotecnica, Vol. I &amp; II, Siderea, Roma, 1994</p> <p>G. Rizzoni, Elettrotecnica, III Edizione, Mc Graw Hill, 2013</p>
<b>5</b>	<b>Assessment methods and criteria</b>	Written and oral exam.