

**PAOLO DI STEFANO**

<b>Programme of “Disegno tecnico industriale”</b>		
<b>“ENGINEERING DRAWING AND DESIGN”</b>		
<b>Number of ECTS credits: 9 (workload of 90 hours of teaching + work at home)</b>		
<b>CODE : I1M020</b> <b>TYPE OF COURSE UNIT : Compulsory for 1<sup>nd</sup> Cycle in INDUSTRIAL ENGINEERING, 2<sup>nd</sup> year , 1<sup>nd</sup> semester.</b> <b>Teacher: Paolo Di Stefano</b>		
<b>1</b>	<b>Course objectives and Learning outcomes</b>	<p>Presents a range of design techniques to help students think about, evaluate, and communicate designs. In this fundamentals course, students are introduced to basic technical drawing skills and terminology. Terms and definitions used in industries, such as manufacturing and mechanical construction. Applications will include working drawings and assembly drawings. Students will be exposed to a wide variety of technical drawings in order to gain information about simple or complex parts, assemblies, systems, standards, and practices used in the world of manufacturing for precision and quality control.</p> <p>This course seeks to look at the GD&amp;T language and its related symbols, its concepts and rules as well as to read, interpret and specify them so that greater technical and productivity can be achieved. The students are introduced to the Best practices for use of machine elements and in the uses of standards to design the industrial product.</p>
<b>2</b>	<b>Dublin descriptors</b>	<p>Topics of the module include:</p> <ul style="list-style-type: none"><li>Modern design practice and tools.</li><li>Technical drawing theory and practices.</li><li>Orthogonal projection and multiview representation.</li><li>Sections views and auxiliary views.</li><li>Intersections between surfaces.</li><li>Technical drawing symbols, lines and views.</li><li>Dimensioning and tolerancing.</li><li>Working drawings and assembly drawings.</li><li>Use of standards in design.</li><li>Best practices for use of machine elements.</li><li>Screws and Fasteners.</li><li>Rivets welding and bonding.</li><li>Mounting parts onto rotating shafts.</li><li>Sliding bearings and rolling-element bearings.</li><li>Power transmission components.</li></ul>
<b>3</b>	<b>Prerequisites and learning activities</b>	<p>The student must know the basic notions of geometry and geometric constructions.</p>
<b>4</b>	<b>Teaching methods and language</b>	<p>Lectures and exercises. Language: Italian</p> <p><b>Ref. Text books</b></p> <p>- Madsen D.A., Madsen D. P., “Engineering drawing and design”, Delmar CENGAGE DILMAR.</p>
<b>5</b>	<b>Assessment methods</b>	<p>Written and oral exam.</p>