

1. Key Information		
<b>Module Code:</b> 13597	<b>Module Title:</b> Creativity	
<b>Credit Points:</b> 6	<b>Module Status:</b> Compulsory	<b>Module Block:</b> Business & Management
<b>Course Title:</b> BSc in Engineering and Management		<b>Module Theme:</b> Innovation & New Product Development

<b>2. Lecturer:</b>	Ismael Abel Vallés	<b>Tutorial Hours:</b>	Thursday 10:00 till 12:00
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3. Required Reading:	
Change by design. How design thinking transforms organizations and inspires innovation.	<i>Tim Brown, 2009</i>
inGenius: A Crash Course on Creativity	<i>Tina Seelig, 2012</i>
Blue Ocean Strategy	<i>W. Chad Kim, Renée Mauborgne, 2008.</i>
Six Thinking Hats: an essential approach to Business Management <a href="http://www.debonogroup.com/six_thinking_hats.php">http://www.debonogroup.com/six_thinking_hats.php</a>	<i>De Bono, 1999</i>
Innovación 2.0. Por qué cuando hablamos de Innovación nos olvidamos de las personas	<i>Rao, Jay / Chuan, Fran.</i>
Global Entrepreneurship Monitor <a href="https://www.gemconsortium.org/">https://www.gemconsortium.org/</a>	<i>Babson &amp; GEM Consortium</i>

#### 4. General overview of the module

Creativity is an essential competence to develop in people and organizations of the 21st century. At individual level, we will acquire knowledge, techniques and develop skills that will make us more creative. The ability to create is what distinguishes human beings from the rest, and this is being able to 'imagine', generate ideas, those ideas will be first real in our mind and then we need to have the capacity to put them into practice.

In the knowledge society it is fundamental to move forward in this sense, not only as people, but also the challenge is posed for all kinds of organizations, companies, public entities and society in general. We will see why it is so important to generate value and solve the needs our society faces.

During the course we will work developing creativity on an individual level and by teams, we will propose models that will allow organizations to become more intelligent and creative entities. We will identify which are barriers, brakes and inhibitors that prevent us from being original, different; we will look for methods that allow us to change the paradigm, overcome the status quo and get to contribute quality in ideas based on quantity and method. We will see how to direct and focus the creative efforts applied to the design and development of new products. We will apply techniques to choose, filter and mature the most powerful ideas. We will work on risk management, uncertainty and even ambiguity in the process of creativity, design and development of new products, services and projects.

We will introduce techniques to finally consider the economic dimension, costs, return as criteria in the final phase prior to the implementation of innovative projects and ideas in the real world.

##### Creativity Portfolio:

- Teams will be created that will work together during the course
- Each team will apply the techniques of creativity and development of new products and / or services following teacher instructions.
- In the event that there is an entrepreneurial project of any of the team members, if the team agrees, they can work on that project.
- Individual activities will also be included in the portfolio.

#### 5. Recommended prior knowledge

Code	Module

#### 6. Module objectives – Learning outcomes

##### Basic and general Competences

02 - Use the technological and economic techniques, skills and tools necessary for the professional practice of engineering and business management.

04 - Learn to analyze the different elements that interact in making business decisions.
CB2 - That students know how to apply their knowledge to their work or vocation in a professional manner and possess the skills that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within your area of study
<b>Specific Competences</b>
05 - Design innovation management strategies applying the appropriate techniques, models and tools

7. Teaching and learning units	
Unit	Schedule
<ul style="list-style-type: none"> <li><b>Unidad 1 – Creativity in business</b> <ul style="list-style-type: none"> <li>Reasons to be creative.</li> <li>Innovation is a must.</li> <li>Global Entrepreneurship Monitor.</li> <li>Open innovation.</li> <li>Smart Specilization Strategy.</li> <li>Circular economy.</li> </ul> </li> </ul>	Session/Week  3 session
<ul style="list-style-type: none"> <li><b>Unidad 2 – Promoting creativity at company level</b> <ul style="list-style-type: none"> <li><b>Creativity techniques and methods.</b> <ul style="list-style-type: none"> <li>Strategic Stairs</li> <li>Golden Circle,</li> <li>Visioning the Future</li> <li>Stakeholder analysis</li> <li>Problems Tree &amp; Vester</li> <li>Empathy Maps</li> <li>Building the value proposition.</li> <li>Blue Ocean Strategy</li> <li>SCAMPER</li> <li>6 Thinking Hats</li> <li>Mind Mapping</li> <li>Building powerfull messages</li> </ul> </li> </ul> </li> </ul>	14 sessions
<ul style="list-style-type: none"> <li><b>Unidad 3 – Managing the Development of New Products and Services</b> <ul style="list-style-type: none"> <li>Open Innovation</li> <li>Technology Managment. TRL</li> <li>Design of new products/services, Design Thinking</li> <li>Portfolio Management &amp; Road Mapping</li> <li>Agile Management</li> </ul> </li> </ul>	13 sessions

8. Teaching and learning methods							
Unit	Theory (Classroom)	Practical (Classroom)	Practical (Laboratory)	Practical (Classroom)	Practical (ICT)	Self-guided study	TOTAL HOURS
1	4	5				25	34
2	15	10				40	65
3	6	20				40	66
<b>TOTAL HOURS</b>	<b>25</b>	<b>35</b>				<b>105</b>	<b>165</b>

9. Assessment		
Overview	Nº of activities	Weighting (%)
<b>Continous Evaluation (team portfolio and individual Jobs)</b>	<b>2</b>	<b>40%</b>
<b>Synthesis Test 1</b>	<b>1</b>	<b>30%</b>
<b>Synthesis Test 2</b>	<b>1</b>	<b>30%</b>
<i>Student evaluation will consist of both continuous and summative assessments:</i>		
1. <i>Continuous assessment: The submission of practical work either carried out individually or in groups and participation in the different activities both inside the classroom, such as the analysis, summation</i>		

*and discussion of required readings, and outside including company visits, will account for this mark. This part of the assessment carries a weighting of 40% towards the final mark.*

2. Summative assessment: *These tests (Synthesis Test 1 & Synthesis Test 2) can combine both theoretical and practical content. This part of the assessment carries a total weighting of 60% towards the final mark (30% in each Test)*

*Continuous assessment is attendance based and non-recoverable. Therefore, the mark obtained for this part of the assessment will serve for both the first summative assessment and any subsequent repeat if required. The repeat will only be available at the end of the semester.*

*In order to pass the module an average of more than 5 in each tests must be obtained. The final mark will be calculated by the average weightings of the summative assessment in combination with the continuous assessment. The final mark achieved must be 5 or above to pass the module.*

*Attendance is compulsory to ensure that you extract the most value from the module and meet the learning requirements. Therefore, session absence accounting for more than 15% of the prescribed hours will result in the inability to be awarded a mark for continuous assessment. Consequently, the maximum mark that can be achieved will be that obtained solely from the summative assessments.*

*Students enrolling in the module for the second time will receive specific instructions from their lecturer on what is required for them to pass the continuous assessment element. The final mark will be obtained by combining the summative assessment (80%) and the continuous assessment (20%), having to gain a final mark equal to or greater than 5 to pass the module.*

*All students must comply with the rules of writing, spelling and grammar in the development of their work and their assessment tests.*