



PHD PROGRAM IN APPLIED ENGINEERING

COMPULSORY TRAINING OF THE PHD PROGRAM

Course Title	Innovation and entrepreneurship
Duration	2 ECTS (50 h)
Type of activity	Tutoring: 15 h Practicals and student's personal work: 35 h
Contents	<ol style="list-style-type: none">1. Introduction to Innovation and Entrepreneurship2. Innovation Management<ul style="list-style-type: none">- Innovation Models- Innovation Processes- Innovation Paradigms and Strategies3. A Comprehensive View of Entrepreneurship<ul style="list-style-type: none">- Concepts related to entrepreneurship- Entrepreneurship and Intrapreneurship Models4. Entrepreneurship Management<ul style="list-style-type: none">- Strategies and Models of Entrepreneurship- Entrepreneurship Process5. Techniques and Tools for Innovation and Entrepreneurship Management<ul style="list-style-type: none">- Technology Foresight- Competitive Intelligence- Business Models- Business Plan- Other advanced techniques
Bibliography	<ul style="list-style-type: none">- BESSANT, J. R. & TIDD, J. 2007. Innovation and entrepreneurship, Hoboken, N.J., Wiley ; Chichester : John Wiley [distributor].- DRUCKER, P. F. 2007. Innovation and entrepreneurship: practice and principles, Amsterdam ; London, Butterworth-Heinemann.- GOFFIN, K. & MITCHELL, R. 2005. Innovation management: strategy and implementation using the pentathlon framework, Basingstoke, Palgrave Macmillan.- HOWELLS, J. 2005. The management of innovation and technology, London, Sage.- KOURILSKY, M. L. & WALSTAD, W. B. 2007. The entrepreneur in youth: an untapped resource for economic growth, social entrepreneurship, and education, Cheltenham [etc.], Edward Elgar.- PEÑA, I. & ARANDO, S. 2005. Regional Entrepreneurship Monitor: Comunidad Autónoma del País Vasco : informe ejecutivo 2004, San Sebastián, Sociedad de Estudios Vascos.- SCHILLING, M. A. 2005. Strategic management of technological innovation, New York, McGraw-Hill/Irwin.- SEXTON, D. L. & LANDSTROM, H. 2000. The Blackwell handbook of entrepreneurship, Oxford, Blackwell Business.- TIDD, J. & BESSANT, J. R. 2009. Managing innovation: integrating technological, market and organizational change, Chichester, John Wiley.- TROTT, P. 2002. Innovation management and new product development, Harlow, Financial Times Prentice Hall.
Learning outcomes	<ul style="list-style-type: none">- Understand the essence and fundamental concepts of Innovation and Entrepreneurship.- Describe and differentiate academic and organizational approaches to innovation and entrepreneurship.



	<ul style="list-style-type: none">- List and describe the elements of a business plan and their required information.- Identify key elements of Innovation and Entrepreneurship Management within organizations (strategy, competencies, benefits, etc.).- Describe the management areas of innovation and entrepreneurship and relevant aspects for efficiency.- Explain and interrelate organizational capabilities required to be innovative.- Understand principles and practical application of processes, knowledge, skills, techniques, and tools for managing from idea to development.- Identify processes in the innovation process map within a company, justifying the need for new processes or modifications.- Explain the phases of the innovation process, its inputs and outputs, and the associated management tools.
Assessment	Assessment will be on a Pass/Fail basis
Timing within the PhD program	Between the 1st and 3rd year of the thesis