

PHD PROGRAM IN APPLIED ENGINEERING

COMPULSORY TRAINING OF THE PHD PROGRAM

Course Title	Design of experiments
Duration	3 ECTS (75 h)
Type of activity	Tutoring: 15 h Student practicals and individual work: 60 h
Contents	<ol style="list-style-type: none"> 1. Introduction to DOE 2. Full factorial design 3. Fractional factorial design 4. Taguchi method
Bibliography	<ul style="list-style-type: none"> - BOX, GEORGE E.P.; HUNTER, WILLIAM G.; HUNTER, J. STUART. Estadística para investigadores. Ed. Reverté, Barcelona, 1988 - PRAT, ALBERT; TORT-MARTORELL, XAVIER; GRIMA, PERE; POZUETA, LOURDES. Métodos Estadísticos. Control y mejora de la calidad. Ed. UPC, Barcelona, 1997. ISBN 84-8301-222-7 - PHADKE, MADHAV S. Quality Engineering using robust design. Ed. AT&T Bell Laboratories, 1989. ISBN 0-13-745167-9. - TAGUCHI G.; ELSAYED A. E.; HSIANG T. Quality Engineering in Production Systems. Mc Graw Hill, 1989. ISBN 0-07-062830-0. - HIRANO, Hiriyuki. Poka Yoke. Mejorando la calidad del producto evitando los defectos. Productivity Press, Inc. ISBN: 84-87022-73-1
Learning outcomes	<ul style="list-style-type: none"> - Demonstrate the capacity to manage Research, Development and Technological Innovation. - Possess and understand knowledge that provides a foundation or opportunity to be original in the development and/or application of ideas, often in a research context.
Assessment	Assessment will be on a Pass/Fail basis.
Timing within the PhD program	Between the 1st and 3rd year of the thesis.