Course Syllabus for
Industry 4.0 PhD
(years 2022-23 /2023-24)

Course title	Applications of MATLAB
Scientific Discipline Sector	ING-INF/04
Hours of instruction	20 hours
CFU	2 CFU
Semester	Second semester
Goal	The course shall address the various functionalities of MATLAB with applications to engineering. The course participants will be able by the end of the course to use MATLAB autonomously. Each lesson shall consist in lecture and numerical examples.
Syllabus	Environment of the MATLAB Software Predefined functions Working with matrices Graphical functions Functions defined by the user Inputs and outputs controlled by the user Control structures and logical functions Symbolic math Modeling and simulation in Simulink
Bibliography	M. Dotoli, M.P. Fanti, MATLAB – Guida al laboratorio di automatica, 448 pp., CittàStudi Edizioni, Grugliasco (TO), ISBN 978-88-251-7325-3, 2008 http://www.cittastudi.it/catalogo/scienze/matlab-3231/autori William J. Palm, Introduction to MATLAB for Engineers, McGraw-Hill, ISBN 978-0073534879, 2011, http://www.mheducation.com/highered/product.M0073534870.html Slides and support material from lecturer.
Examination method	Final examination in class