Course Syllabus for
Electrical and Information Engineering PhD or Industry 4.0 PhD (select one)
(years 2022-23 /2023-24)

Course title	Human-centered design in AI
Scientific Discipline Sector	ING-INF/05 ING-IND/35
Hours of instruction	20 hours
CFU	2 CFU
Semester	Second semester
Goal	The course will provide a broad introduction to the topic of Human-centered design in Artificial Intelligence. The course will address topics in the product development flow as: methods, best practices and examples for designing with AI. The course participants will be able by the end of the course to understand how to design AI systems and make them more understandable, trustworthy, reliably fair, and useful. The lessons alternate theoretical lectures and implementation examples or practical workshops.
Syllabus	Define user needs and problem statement Ideation and research methods Data collection & evaluation Responsible AI (fairness, explainability, accountability, etc.) Feedback and control mechanisms to improve the user experience Prototyping methods Design an AI production system end-to-end
Bibliography	Machine Learning Engineering for Production (MLOps) Specialization - Andrew Ng https://www.coursera.org/specializations/machine-learning-engineering-for-production-mlops Machine Learning Systems Design – Chip Huyen – Stanford course https://stanford-cs329s.github.io/syllabus.html This is service Design Doing Stickdorn, Hormess, Lawrence, Schneider – O'Reilly ISBN 9781491927182 AI Guidebook: https://pair.withgoogle.com/guidebook Slides and support material from lecturer.
Examination method	Presentation of a project work.