

**** Title ****

Assistive Technology (ATH)

**** CFU ****

6 [complementary]

**** Learning outcomes ****

Knowledge: Learn more about the methods of using Assistive Technologies for making digital health accessible in the presence of motor, sensory and cognitive disabilities. Analyze real case studies.

Skills: Ability to solve simple problems of accessibility with patients with disabilities using existing technologies.

Behaviors: The student will learn how to design of software tools and systems having in mind the accessibility and usability requirements for the various types of disabilities.

**** Syllabus ****

- Characteristics of motor, sensory and cognitive disabilities important for the development of accessible software tools and systems
- Participatory Design in presence of disabled users
- Overview of technological aids related to motor, sensory and cognitive disabilities
- Accessibility
- Augmentative and Alternative Communication (AAC)
- Presentation of good practices of case studies regarding different types of disabilities
- Practical experience in designing and developing material for customized sanitary paths
- Overview of Internet of Things and cyber-physical systems and their applications to e-health and ambient assisted living applications
- Practical experience in the use of sensors as aids for autonomy in the access to prevention and treatment paths

**** Course organization & Assessment****

Lectures: 60%

Laboratory/practice: 40%

Assessment:

(during the lectures) Frequent anonymous questionnaires using interactive tools (e.g. Mentimeter) and self-assessment exercises. Observation during interactive exercises and the development of educational projects. Brainstorming with students.

(exam) The exam consists in the preparation of a didactic project or a review of a topic to be agreed with the teacher and an oral exam.

**** Prerequisites ****

Imperative, object, and event programming