

Specialized training session by CTT

T11230-101 – Smart Textiles



Who is this course for?

This course is intended for designers, manufacturers and research staff who wish to discover the operating principle of smart textiles, the nature of conductive materials and components and identify examples of applications for their respective markets.

Prerequisite

Know the technical vocabulary of textiles: fibres, yarns, knitwear, wovens, nonwovens, etc.

Content

- Definition of Smart Textiles and Related Terms
- Conductive materials: nature of conductors, advantages and disadvantages
- Reactive materials: nature and principle of operation
- Processing techniques: formation of a common thread, a fabric or a finished product
- Examples of applications: textile sensors (physiological sensor, pressure, impact, humidity sensor, etc.)
- Examples of actuators: heated, luminous and reactive textiles.
- Derived technologies: textiles capable of collecting energy, thermoregulating textiles and shape memory materials.
- The commercialization of connected textile technologies: success stories and issues to consider

Learning Objectives

- Know the categories of smart textiles: what they are, how they work
- Know how to select the smart material according to the needs
- Discover many examples of applications of smart textiles

Your Trainer



Justine Decaens, Manager R&D, M.sc.A.

With a master's degree in mechanical engineering and the equivalent of a bachelor's degree in textile engineering, Ms. Decaens has led several projects related to Arctic climate protection. Her master's project focused on the development of a performance index for the evaluation of traditional winter clothing and integrating active technologies.

April 28th, 2026 (in French) or April 30, 2026 (in English)
285\$/individual + taxes (270,50\$/individual for CTT members)

Duration : 3h including a 30 minutes visite of the labs, Starting : 10h30, Ending : 14h30,
(meals at your own expense, in the Cégep cafeteria). In-person only, at the Groupe CTT, 3000 avenue Boullé, Saint-Hyacinthe