COMPETENCY 1 FOR ELECTRONICS AND INDUSTRIAL IT ENGINEERS	Developing a technical solution that factors in technological, economic, human, and environmental requirements
Workplace situations	**Development trajectories**
Management of customer needs	Respond to the specifications. Recommend pertinent solutions that integrate the latest scientific and technological advances. Choose a solution that responds to economic, human, and environmental requirements.
Prototype design	Demonstrate an understanding of technical documentation. Draw up specifications for the chosen solution. Plan the development stages. Determine a validation method and testing environment.

COMPETENCY 2
FOR ELECTRONICS AND INDUSTRIAL IT ENGINEERS

Interface a set of hardware/software components

Workplace situations	Development trajectories
Component assembly	Ensure that components are compatible with each other. Improve electrical signal transmission (wired or wireless). Improve the software, factoring in processing speed, hardware resources, and energy consumption.
Communication of components	Implement an appropriate communication protocol. Factor in electromagnetic propagation phenomena. Implement a command-control system using the tools available. Implement testing procedures to validate operability.

COMPETENCY 3 FOR ELECTRONICS AND INDUSTRIAL IT ENGINEERS	Developing a complete system that includes sensors, information processing, communication, and switches
Workplace situations	**Development trajectories**
System maintenance and updates	Identify a pertinent technological update (technological intelligence). Schedule maintenance. Ensure operating safety through preventive maintenance. Update the system.
Building a new application	Model the physical phenomenon to measure and the associated information chain. Utilize a method appropriate for processing the information (signals, images). Design the new application, factoring in cost, reliability, maintenance, and sustainable development requirements. Prototype the application with the tools available in the work environment. Ensure system operability and stability.

COMPETENCY 4
FOR INDUSTRIAL ELECTRONICS AND IT ENGINEERS

Communicating about his or her scientific and technical project and on the work completed

Workplace situations	Development trajectories
Promotion of a project	Demonstrate the ability to defend a project based on the context, socioeconomic challenges, and outlook. Utilize the appropriate multimedia communication tools.
Dissemination of knowledge	Write a technical manual or article for the general public. Contribute to training and the dissemination of knowledge or competencies within the organization or outside the organization.
Relationship to different work environments	Adapt his or her communication style to the audience (supplier, customer, co-worker). Position him- or herself in a way that is consistent with his or her degree of expertise. Present information orally and in writing clearly in at least French and English.

COMPETENCY 5 FOR INDUSTRIAL ELECTRONICS AND IT ENGINEERS	Performing technological intelligence
Workplace situations	**Development trajectories**
Dissemination of knowledge	Determine how long a technology is likely to be in use before it becomes obsolete. Produce work that demonstrates thinking on an emerging technology. Acquire new competencies through continuing professional development.
Compilation and organization of scientific and technical data	Summarize information from a variety of sources (books, online, forums, etc.). Interact with public- and private-sector research organizations, in France or internationally.

COMPETENCY 6 FOR INDUSTRIAL ELECTRONICS AND IT ENGINEERS	Professional behavior
Workplace situations	**Development trajectories**
Managing a socioeconomic activity	Manage men and women in a multicultural context. Demonstrate an understanding of the needs and requirements of a market or group of customers. Prepare a budget and ensure financial profitability. Factor in legal requirements.
Contribution to creating a new business	Demonstrate knowledge of creativity tools and utilize them appropriately. Effectively manage all of the stages of the process. Factor in the broader implications of the new business.
Develop a career path	Demonstrate openness to new cultural environments. Develop a career plan. Build and expand a professional network.