COMPETENCY 1 *COMPUTER SCIENCE AND ELECTRONICS FOR EMBEDDED SYSTEMS* **ENGINEERS**	**Developing a technical solution that factors in technological, economic, human, and environmental requirements**
Workplace situations	*Development trajectories*
Prototype design	Respond to the specifications.
	Demonstrate an understanding of technical documentation.
	Integrate the latest scientific and technological advances.
	Recommend innovative solutions.
Changes to the production environment	Ensure the reliability and reproducibility of products.
	Develop a production chain.
	Integrate cost requirements.
	Adapt to environmental requirements.

COMPETENCY 2 *COMPUTER SCIENCE AND ELECTRONICS FOR EMBEDDED SYSTEMS* **ENGINEERS**	**Interfacing 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 *COMPUTER SCIENCE AND ELECTRONICS FOR EMBEDDED SYSTEMS* **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.
Build 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 *COMPUTER SCIENCE AND ELECTRONICS FOR EMBEDDED SYSTEMS* **ENGINEERS**	**Integrating into and interacting within the company**
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.
Integration into the company	Demonstrate responsible, professional behavior.
	Exercise critical thinking.
	Integrate into a team, work as part of a team.

COMPETENCY 5 *COMPUTER SCIENCE AND ELECTRONICS FOR EMBEDDED SYSTEMS* **ENGINEERS**	**Supporting changing technology**
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.