

Training Opportunity for Luxembourgish Trainees

Reference	Title	Duty Station
LU-2023-TEC-SYE	Systems Engineering and Concurrent Space Mission Design	ESTEC, Noordwijk, the Netherlands

Overview of the mission:

The Systems Engineering Division of the Directorate of Technology, Engineering and Quality is responsible for the following main activities:

- Providing cost engineering support, tools and estimates for ESA projects;
- Providing systems engineering support for projects in various phases of development;
- Conducting R&D activities related to systems engineering methodologies and tools;
- Managing and providing technical support for small spacecraft projects for technology demonstrations, including preparatory activities (feasibility studies, pre-developments, etc.);
- Managing and providing technical support for small projects for in-orbit technology demonstrations (instruments, payloads, etc.);
- Managing the Concurrent Design Facility (CDF) and performing Phase 0 and support activities for ESA projects.

In particular, the Systems and Concurrent Engineering Section is responsible for the following main activities:

- Managing the Concurrent Design Facility (CDF) and performing Phase 0 studies to assess the feasibility of future ESA missions;
- Providing systems engineering support for ESA programmes and projects in various phases of development;
- Conducting R&D activities related to systems engineering methodologies and tools;
- Providing technical support for small spacecraft projects for technology demonstrations and/or education, including preparatory activities (feasibility studies, pre-developments, etc.);
- Designing and developing models, databases, tools, architectures to support and enhance systems engineering practices, methodologies and applications across disciplines, project phases and organisations.

Overview of the field of activity proposed:

As a LuxYGT, you will be actively involved in:

- multidisciplinary engineering activities, including the feasibility assessment and conceptual design of future space missions;
- systems engineering support for space mission studies in the Concurrent Design Facility;
- the development of engineering tools, models and databases for use within the CDF infrastructure and in support of the concurrent engineering approach, including the infusion of novel technology (e.g. AI, AR/VR, MBSE, etc.);
- technology developments and R&D that explore novel methods and processes aiming to improve systems engineering practices;
- other systems and project activities, depending on incoming requests and your specific technical background and motivation.

Required education and skills:

- You should have just completed or be in the final year of your master's degree in aerospace (systems) engineering or a related field (such as electrical engineering, telecommunication engineering or mechanical engineering).
- Good interpersonal and communication skills
- Ability to work in a multi-cultural environment, both independently and as part of a team
- Fluency in English and/or French, the working languages of the Agency