

## Training Opportunity for Luxembourgish Trainees

Reference	Title	Duty Station
LU-2020-OPS-SC	Clean Space Engineering	ESTEC
<p><b><u>Overview of the unit's mission:</u></b></p> <p>Clean Space aims to turn challenges into an opportunity, giving a proactive answer to the environmental challenges both on earth and in space, including the Agency's own operations as well as operations performed by European space industry in the frame of ESA programmes.</p> <p>The implementation of the Clean Space initiative is organised around three distinct branches: Ecodesign, Management of end of Life /Space Debris Mitigation, and Active Debris Removal and In Orbit Servicing.</p>		
<p><b><u>Overview of the field of activity proposed:</u></b></p> <p>In 2012 through EcoDesign branch, ESA started to assess the environmental impact of its space missions with a number of Life Cycle Assessment (LCA) activities. The LCA studies previously performed by ESA looked at both spacecraft and launchers and identified the environmental impact in terms of various environmental indicators such as Global Warming Potential, Ozone Depletion Potential, Human Toxicity Potential, Metal Depletion Potential to name but a few. While ESA has become a worldwide leader in this area, there are still many uncertainties that need to be investigated.</p> <p>Furthermore, unlike ground-based products, currently space products cannot be reused or recycled. The reuse of space debris in orbit would turn a problem into a valuable asset, leading to an increased interest from government and industry in orbital debris removal so they may be used for different applications.</p> <p>You will be working in the area of eco-design and management of end of life and in particular in:</p> <ul style="list-style-type: none"> <li>• Follow up several eco-design studies being carried out within the agency and upgrading the ESA LCA Database: containing specific space materials, processes and equipment</li> <li>• Design for Recycling: design philosophy to ease in-orbit recycling operations aiming at space sustainability</li> <li>• Generic system engineer to follow a number of the industrial activities either technology or system studies (and/or to support on close proximity (consolidation of requirements)</li> </ul>		
<p><b><u>Required education:</u></b></p> <ul style="list-style-type: none"> <li>• Master-level degree in Environmental science and/or Space Engineering</li> <li>• Fluency in English and/or French, the working languages of the Agency</li> </ul>		

