

Training Opportunity for Belgian Trainees

Reference	Title	Duty Station
BE-2018-DG-SE(2)	Engineering Training Content Development	ESEC

Overview of the unit's mission:

The [ESA Education Office](#) has the objective to use space as a theme to enhance the literacy of young people in science and technology and to motivate students from ESA Member and Associate States to prepare to pursue a space related career. In support of achieving its educational objectives, the Office offers to university students, in the frame of the ESA Academy programme:

- a number of opportunities to gain hands-on involvement in space-related projects, including satellite projects, and experiments to be conducted on dedicated platforms reproducing special environmental conditions (such as sounding rockets, stratospheric balloons, drop tower facility, hyper-gravity centrifuge, and parabolic flights). These activities enable a transfer of knowledge, offer an insight into professional processes and promote the development of relevant scientific and technical skills and competences.
- a portfolio of training sessions, in all areas of ESA's expertise, delivered at the ESA Academy's Training and Learning Centre, to complement what they are learning at university and to better prepare them for a space-related career.

The Office works in close cooperation with ESA specialists from different directorates, industry experts, university institutions and other research organisations.

Overview of the field of activity proposed:

You will support the development of engineering content for training sessions to be delivered at ESA Academy's [Training and Learning Centre](#). In particular you will contribute to the development and preparation of Concurrent Engineering Workshops and Workshops on Space Engineering making use of satellite models. Under the supervision of the ESA Project Manager, you will:

- get acquainted with the Concurrent Engineering approach and the Open Concurrent Design Tool (OCDDT);
- for the different engineering disciplines, test the existing calculation sheets of the analysis and mission design model, improve them and develop new ones for additional disciplines and different mission objectives;
- assist the CDF system engineers and support the preparation and execution of Concurrent Engineering Workshops;
- get acquainted with the "ESAT" satellite model for hands-on training, its hardware and software, the electrical ground support equipment (EGSE), and the satellite model control system;
- prepare exercises on the various technical functionalities of the satellite model, and support the development and validation of the lab sessions; support the development and testing of additional subsystems/payloads for the satellite models;
- interface with ESA technical experts;
- support the development of the training content and material for the Space Engineering training sessions.

In addition to your tasks, you will have the chance to attend several training sessions for university students organised in the framework of the [Training and Learning Programme](#).

You may also contribute to other educational opportunities created by the ESA Education Office.

Required education:

Applicants should have:

- a background in an engineering field;
- knowledge of the space environment and spacecraft subsystems, with a good understanding of at least three of the following fields:
 - space systems engineering;
 - energy/power engineering;
 - telecommunications;
 - attitude determination and control engineering;
 - thermal engineering;
 - structure and mechanisms;
 - on-board data handling;
 - optics;
- good interpersonal and communication skills and should be able to work in a multi-cultural environment, both independently and as part of a team,
- Applicants must be fluent in English and/or French, the working languages of the Agency. A good proficiency in English is required.