

DESIGN, BUILD AND FLY

EXCHANGE PROGRAMME

INFORMATION FOR INTERNATIONAL STUDENTS



AMSTERDAMUAS.COM

DESIGN, BUILD AND FLY

THIS PROGRAMME BROADENS YOUR KNOWLEDGE OF DESIGN ASPECTS OF TECHNICAL ENGINEERING AND TROUBLESHOOTING. YOU WILL LEARN ABOUT THE IMPORTANCE OF WEIGHT DISTRIBUTION IN AN AIRCRAFT, AERODYNAMICS AND AIRCRAFT STABILITY AND CONTROL. YOU WILL ALSO GAIN THEORETICAL AND PRACTICAL SKILLS IN THE USE OF COMPOSITE MATERIALS.



Imagine designing, constructing and flying a single-engine fixed-wing unmanned aerial vehicle (UAV) in a single semester. Sound far-fetched? Not at the Amsterdam University of Applied Sciences! If this is the type of challenge that has you reaching for the nearest toolbox, than the exchange programme Design, Build and Fly could be for you.

COURSE FOCUS AREAS

With only a few hard parameters, your ideas and creativity can take the lead. This unique exchange programme captures the full design cycle and ends with a design report, an operational UAV and a flight data and characteristics analysis. Most importantly, you will learn how to integrate all the different aeronautical disciplines and evaluate design demands to produce a coherent design.

EDUCATIONAL FORMAT

You will work in a project team with four to six other highly motivated students from around the world. Over the course of a single semester, your team will first design, then build and ultimately fly your own unmanned aerial vehicle. Your work will be assessed on the basis of your project team's design report and the flight behaviour of your UAV.

LEARNING OUTCOMES

After completing this programme, you will be able to:

- ▶ effectively manage and work within a multidisciplinary team on a design project.
- ▶ carefully evaluate design demands and justify all multidisciplinary design decisions.
- ▶ design a model aircraft using composite materials and integrating (off-the-shelf) autopilot technology.

- ▶ use engineering software and simulators for design validation and prediction of dynamic behaviour.
- ▶ construct a high-quality model aircraft - based on your own technical drawings - using a mix of production and joining techniques.
- ▶ critically assess design quality using data from practical testing.
- ▶ prepare and execute an unmanned 'mission', ensuring compliance with operational requirements and effectively managing risks.

PROGRAMME OUTLINE

- ▶ Credits: 30 ECTS.
- ▶ Educational format: assignment, lectures, workshops.
- ▶ Term: autumn semester (beginning of September - end of January) or spring semester (beginning of February - mid July).

ADMISSION REQUIREMENTS

This exchange programme has a minimum of 15 and a maximum of 32 places and admission may be selective. It is geared towards students with an engineering background, for example in aeronautical, aerospace, automotive, civil, structural or electrical engineering.

The following additional requirements apply:

- ▶ At least 100 credits (ECTS) obtained at your home university before the exchange period.
- ▶ Proficiency in English (CEFR B1).

HOW TO APPLY

If you would like to enrol in this exchange programme, please visit amsterdamuas.com/technology-courses and complete the application form before the deadline.

Enrolment deadlines:

- ▶ Autumn semester: 1 May
- ▶ Spring semester: 1 November

PRACTICAL MATTERS

- ▶ Material costs: 50-150 euro per student (highly dependent on the choices made during the design and production phase).
- ▶ International office: internationalofficeft@hva.nl (visa, housing and other practical matters)



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