



Masters in Flight Test Engineering

Department of Aerospace, Mechanical
Engineering

SETU Carlow Campus

Ireland



— Role of a flight test engineer

- Work and collaborate with test pilots, design engineers, technicians, certifying staff.
- Analyse, design, interpret performance data, pinpoint improvement strategies, and understand safety and ethical requirements related to the flight test.
- Develop the skill and technical knowledge to be the flight test team.



— Role of a flight test engineer

In the area of development:

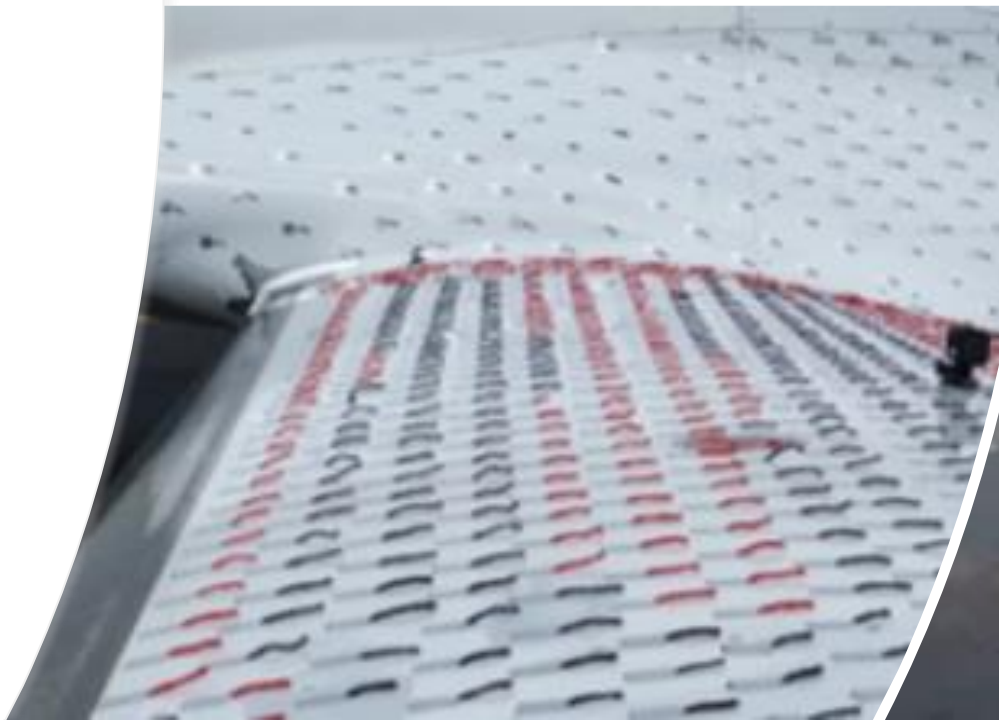
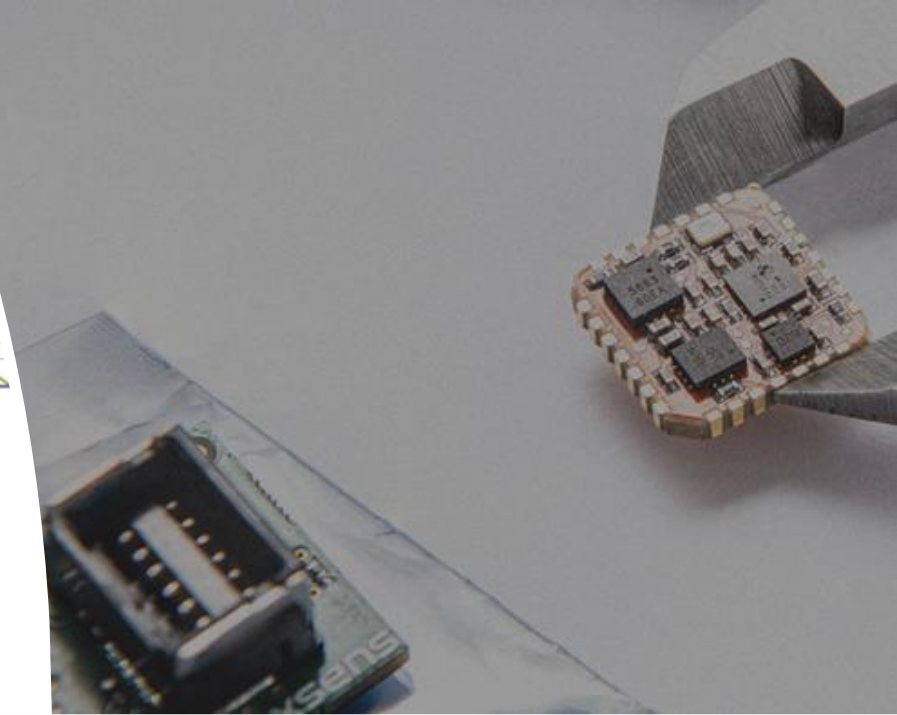
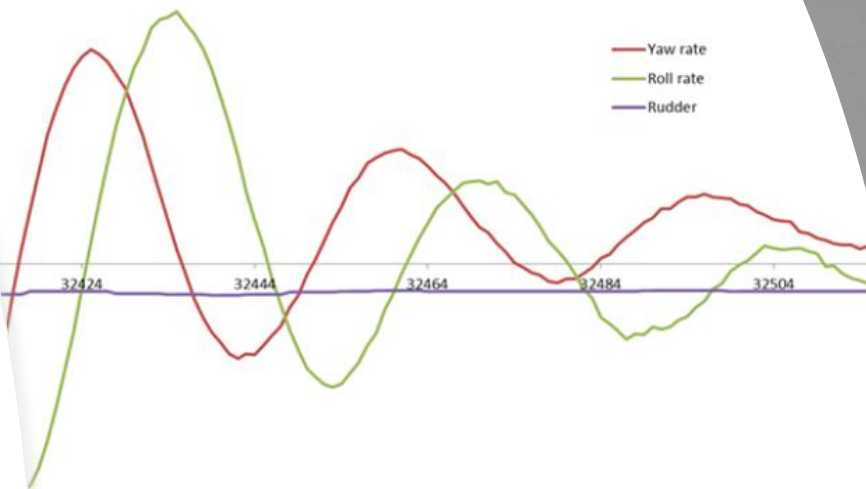
- Testing of new aircraft or modifications.
- Testing of new concepts of airframe, engine, propeller and equipment.
- Testing of new operating techniques.



Data extraction

- Design of data acquisitions systems
- Data reduction techniques
- Modelling and simulation

Dutch roll - 'forced' with no strake



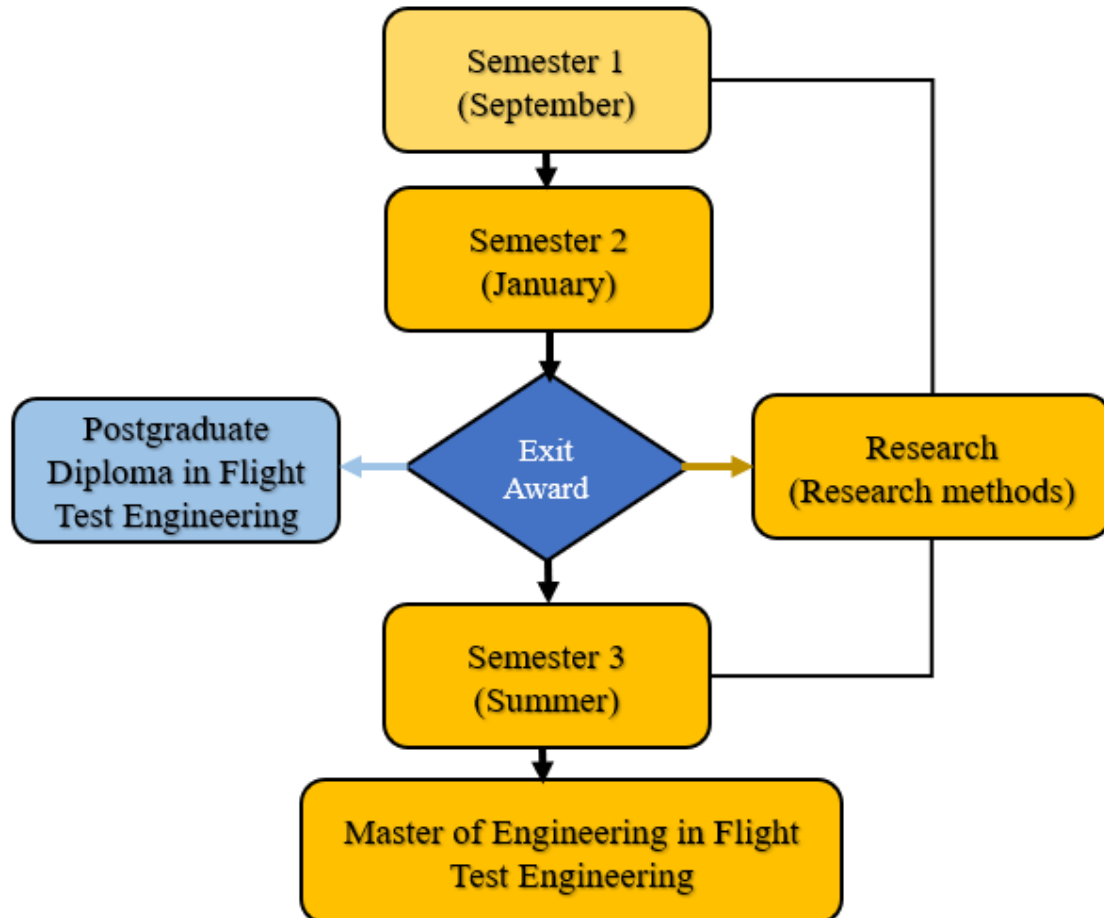


— Role of a flight test engineer

In the area of compliance

- Certification flight testing for type certification
- Supplemental type certificates
- Changes to type certificates or authorisation


M.Eng. in Flight Test Engineering Programme Structure





Stream	Modules
Research	Research Methods for Engineering
	Dissertation
Design	Aerial vehicle platforms
	Unmanned Air Vehicles
Systems	Flight Control Systems
	Electric and Hybrid Propulsion
Analysis	Data Acquisition and Analysis
	Flight testing
Legislation	Aviation Finance and Legislation
Certification	Quality and Environmental Testing
	Avionics Hardware and Software Certification,
Space	Spacecraft Engineering

Stream and Modules



Introducing the VX4



AVOLON

- **Order for up to 500 electric aircraft valued at US\$2 billion**
- **Avolon-e becomes a launch customer for Vertical's VA-X4 eVTOL**
- **The VA-X4 eVTOL will revolutionise air travel with zero emissions**
- **Order underscores Avolon's commitment to combat climate change and the electrification of air transport**

<https://vertical-aerospace.com/>

Current Vacancies

Filter

ALL (38)

CONTRACTOR (5)

ENGINEERING (30)

IT (2)

PEOPLE TEAM (2)

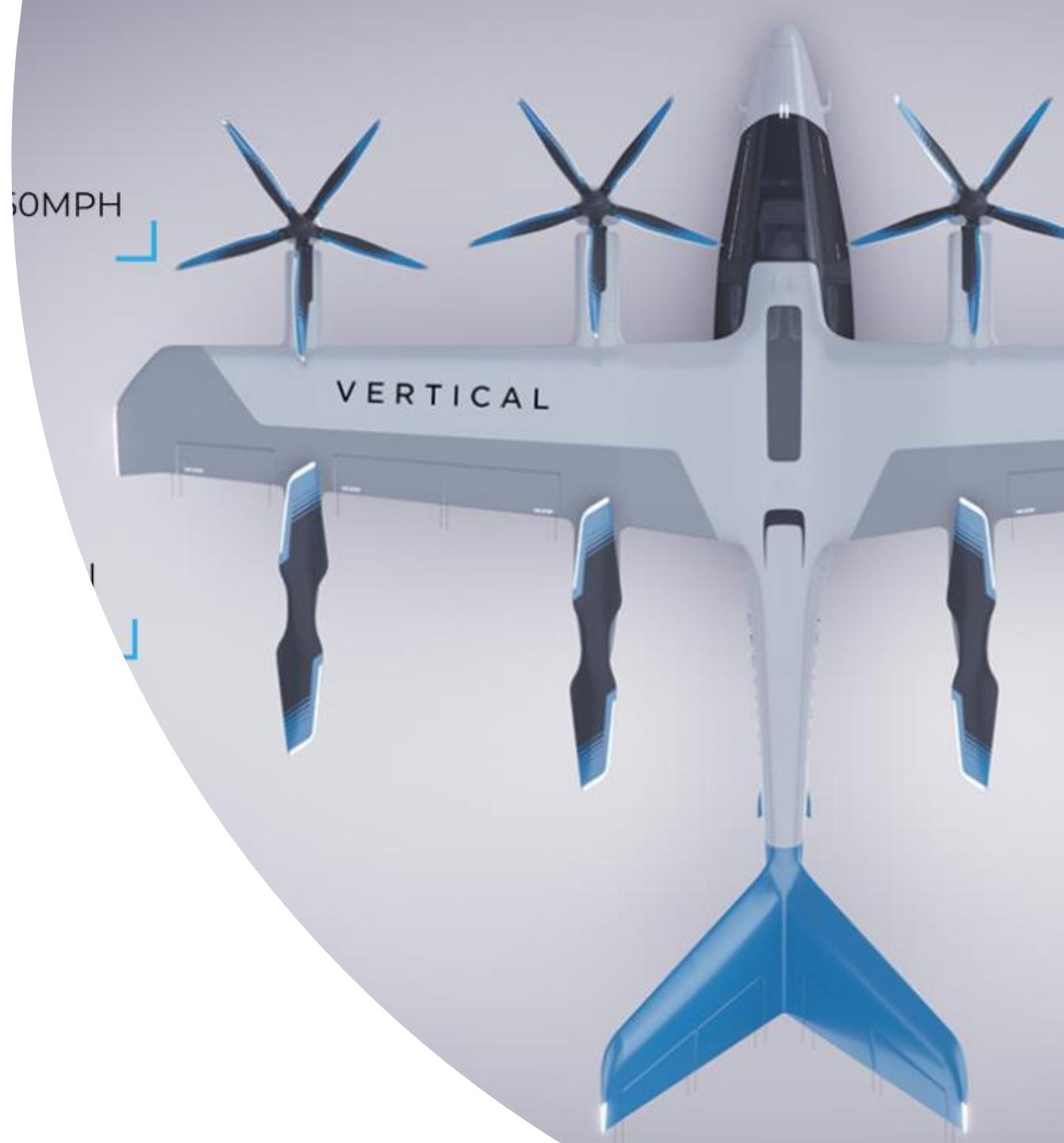
Aircraft System Engineer

Preferred skillset

- Masters or PhD in relevant engineering discipline
- Experience certifying to aerospace standards
- Experience in design of aircraft systems
- Experience with development and testing of aircraft and/or UAS systems
- Pilot/drone license holder

Job advertised 5/4/22

<https://www.vertical-aerospace.com/careers/flight-dynamics-engineer/>





- Air cargo operations where a runway does not exist. Compatible with standard helicopter landing pads
- Payloads of up to 460 kg (1,000 lb) in a 3 m³ (106 ft³) cargo compartment
- Proven and certified lift+cruise propulsion system



Diamond Aviation

Certification Engineer Aircraft Systems (m/w/x)

Responsibilities:

- » Design and development of aircraft systems and components
- » System Safety Assessment and Failure Hazard Analyses
- » Development and performance of tests (ground and flight tests); compilation of test plans and reports
- » Preparation of Specifications and Interface Control Documents
- » Creation of all required production documents (drawings, manuals, manufacturing/acceptance tests procedures)
- » Preparation of the required certification documentation (compliance demonstration, compliance summaries)
- » Interfacing with other departments such as Structures, Electrics/Avionics and Flight Test
- » Interfacing with subcontractors and witnessing of tests

Required Skills:

- » Master's degree in Aeronautics, Mechanical Engineering or similar





Other possible career paths

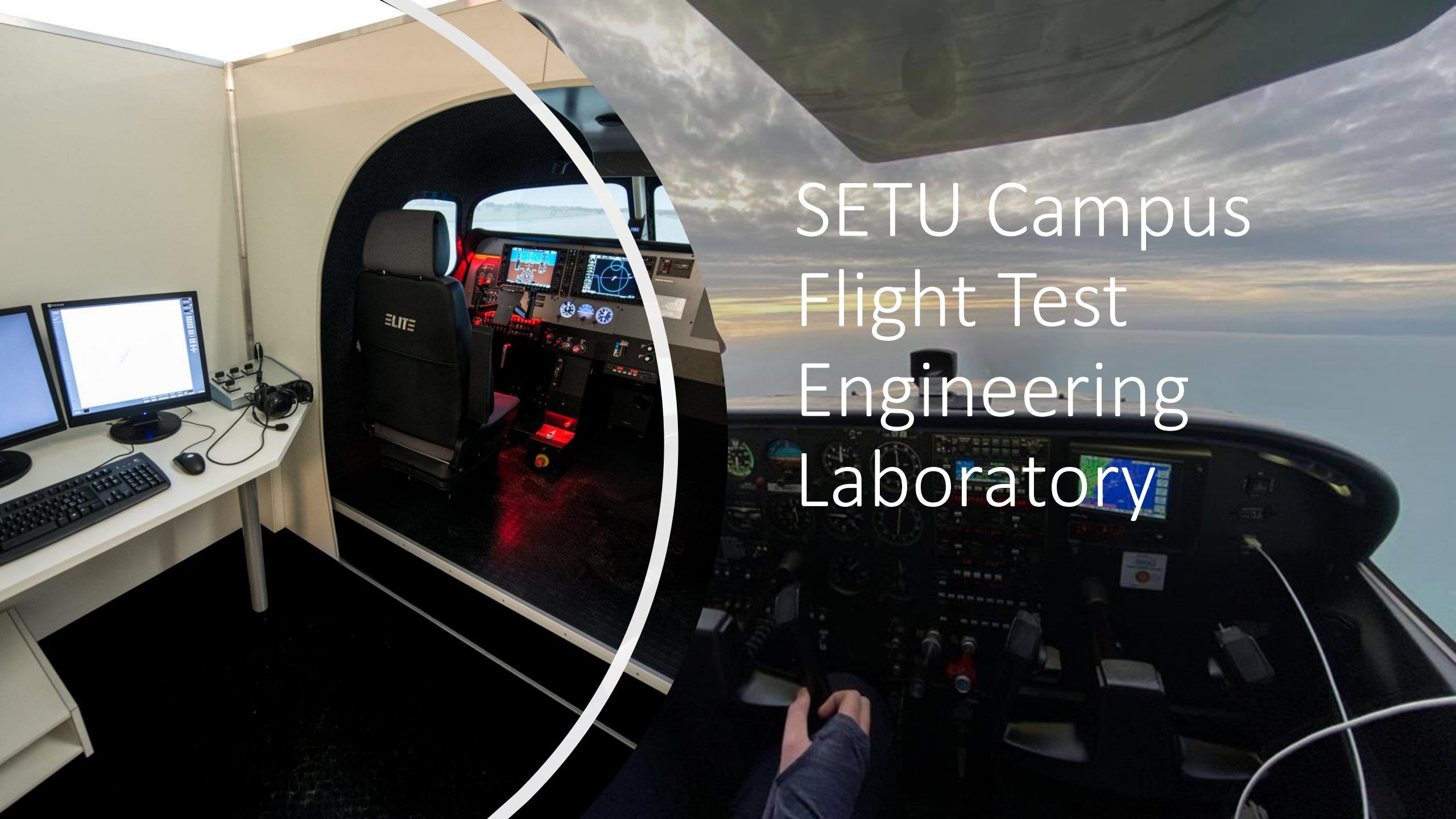
- Other possible career paths that exist are:
 - Avionics Engineer
 - Mechanical Systems Engineer
 - Navigation Engineer
 - Systems Test Engineer
 - Flight Dynamics Engineer
 - Airworthiness Engineer





ATAERA Network of Worldwide Aviation Universities

SETU is a founding member of the Air Transport and Aeronautics Education and Research Association (ATAERA) an international Network of Aviation Universities.



SETU Campus Flight Test Engineering Laboratory