

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
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THE ROLE OF FIRST DEGREES IN ENCOURAGING STUDENTS TO ENTER THE SPACE  
SECTOR: ANALYSIS BY THE ASTRAIOS PROJECT

## Abstract

Most European countries are experiencing a skills shortage in the space sector, and many space companies report that degrees are not providing the knowledge required by industry. However, there is currently a lack of data about what the workforce has studied, what is taught in space degrees at university, and the role of first degrees (bachelor's and master's) in encouraging people to enter the space workforce.

The Horizon Europe project ASTRAIOS (Analysis of Skills, Training, Research and Innovation Opportunities in Space), Grant Agreement No. 101082636, has collected data on the distribution and content of space-related degrees. In this paper, we use key word analysis of 3,854 courses offered within 120 degrees available at approximately 70 universities across the EU-27 and UK.

We first present the distribution of degrees across EU-27 and UK using the collected data and data sourced from LinkedIn Talent Insights, and analyse this data to identify the knowledge and skills taught, the geographic and gender distribution, and internship opportunities available to students. We then assess the role of first degrees in encouraging students to enter the space sector, and compare the current offer of degree programmes to the skills gaps experienced in the sector. Finally, we provide recommendations to education and training providers, and give a description of the ASTRAIOS MOOCs that will be developed to meet these gaps.