

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
In Orbit - Postgraduate Space Education (4)

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ENGINEERING AND MANAGEMENT OF SPACE SYSTEMS - A JOINT GERMANY-POLAND
POSTGRADUATE MASTERS STUDY

Abstract

Engineering and Management of Space Systems (EMSS) is a new dual degree masters course organized via the cooperation between Bremen City University of Applied Sciences (HSB, Hochschule Bremen) and Gdańsk University of Technology (GUT, Politechnika Gdańska) in Poland. Launched in April 2021, the pilot edition featured a group of 15 students from both countries. First students have finished the final semester and have starting preparing their master theses.

With increasing digitization, distribution and networking of technical systems, it is a necessity of a modern engineer to understand “the systems view” and “interdisciplinarity” methods and skills. Furthermore, it is necessary to consider the entire life cycle of the systems starting with the analysis of the requirements, through design, integration, verification, to operation and maintenance. This all forms the motivation for a new course. Especially in the “Space city” Bremen, where numerous satellite and rocket manufacturers have their headquarters. Space technologies are also a growing industry in Poland since its joining European Space Agency (ESA) in 2012.

In advanced technologies sector, especially space-related, engineers and scientists of various background collaborate together in multidisciplinary, almost always international teams. This is why management and social skills are as important as technical knowledge as it , forms a solid basis for mastering the steadily growing complexity of technical systems in practice.

The embodiment of this ideas is the pilot edition of the course. It has been organized as a 3 or 4 semesters masters programme with students from both countries having their first semester in Gdańsk and second semester in Bremen. Extended analysis of the study programme along with challenges of the pilot edition, including remote study due to COVID-19 pandemic will be presented.