

Project Summary

The "MARINTECH" project will strengthen the partnership in the marine engineering field and interdisciplinary programs, between the Naval Academy "Mircea cel Batran" (MBNA) and the Norwegian University of Science and Technology (NTNU). The maritime industry is deeply rooted in the economy and national traditions of both Norway and Romania. In recent decades, there has been a growing interest from economic operators in the development and use of new Intelligent technologies for high-difficulty maritime operations. Maritime operations depend on the interaction between technology, human factors, and business. The SWOT analysis identified two challenges, as a priority, for improving the technological level and the productivity of the maritime industry. The first issue is the development and implementation of intelligent technologies (autonomous and automated) to operate in dynamic and complex marine environments. The second problem facing the maritime industry is the lack of qualified staff to serve these technologies.

Other areas fields use these technologies, such as the port industry, the marine resource exploitation industry, bio marine research, defense system, etc., which need to train personnel to use them. The MARINTECH project is based on the identified needs during the discussions with representatives from the maritime industry, meeting labor market needs for training staff in the new and intelligent technologies of the maritime industry field, and SWOT analysis. The aim is to improve human capital in the field of marine intelligent technologies by improving the skills and competencies of students and staff in Higher Education (HE), facilitating learning mobility of students and staff between BS and DS, and strengthening institutional cooperation of both HE partners based on commonly identified needs.

The general objectives of the project to achieve these directions of action are:

- supporting the development of human capital (students, academic staff) in both universities with a strong interdisciplinary component on marine intelligent technologies;*
- modernization of partner universities;*
- ensuring a closer relationship between the educational offer and the labor market.*

The courses developed in the project are multidisciplinary, jointly certified, with ECTS credits, and recognized in both universities. These are free and available on VTP to be transferred to all interested HE institutions or any stakeholders. The target group is represented by the students from the 2nd cycle of studies (master), from the two partner universities, as well as the staff who carry out activities in the field of the project from these universities.

To professionally develop human capital in the field of marine intelligent technologies (academic staff, students), will be jointly organized summer schools, short-term student mobilities, and short-term staff training events, with the participation of specialists in the field.

The modernization of universities is achieved by improving teaching/learning and assessment methods in the virtual environment, by developing a common curriculum for implementing a course module for students of both universities, in the field of marine intelligent technologies, and through exchanges of experience in the field, the common use of facilities of each partner. The project will also develop a virtual platform (VTP), as an open-source and e-campus for the implementation of mutual learning activities, exchange of academic knowledge, experience, and good practices in the field of marine intelligent technologies, supporting the exchange of staff and students, enabling employers to access to project activities, thus encouraging the involvement of students in activities that allow direct contact with economic partners in solving concrete problems.

The promotion and dissemination of project results will be done through the project website and the university's website, VTP, a joint publication of scientific articles, and conducting joint awareness events (workshops) with potential employers on the labor market, through interviews and articles in the local and national media in the two countries, as well as through promotional materials at events organized by universities on various occasions.

The project objectives are achieved by acquiring skills and practical abilities in the field of marine intelligent technologies for both students and academic staff of both partner universities, which will facilitate student's access to the labor market and direct contact between them and economic partners. Another impact of the project is the strengthening of cooperation between the two universities to modernize them. The intellectual results developed through the project could be shared as a pilot module with other interested universities.