

# **ERASMUS+ COGENERATION PLANTS**

**It is a selective course for graduation level marine engineering students.**

# Course description

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- Aim of the course is to explain cogeneration procedures applied on-board ships. The course brings together main and auxiliary equipment in power and heat production. In addition trigeneration is explained.
  - Some technological novelties are explained and methods of CP plant evaluation.
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# Student obligations

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- Since, only few students select this course, there aren't regular lessons on a weekly basis. On student demand one 3 – 4 hours lectures is given.
  - Using knowledge received through lectures and Internet sources, student is obligated to give an essay.
  - Themes are:
    1. Create an instruction book of one or more existing ship power (cogeneration) plants
    2. Evaluate different cogeneration ship plants
    3. Analyse efficiency coefficients considering it is a ship power plant
    4. Suggest new methods or marine equipment for better energy exploitation
    5. Suggest new method (numerical expression) of ship cogeneration plant efficiency evaluation
    6. Analyse trigeneration processes
    7. Make an exergy analysis of ship cogeneration power plant
    8. Make an instruction book of a relatively new technology for better energy usage
    9. Describe power plant with new type of fuel with small or zero carbon print
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