Erasmus+

Era's muse

Engineering Mini-MOOC

Fly me to the Moon

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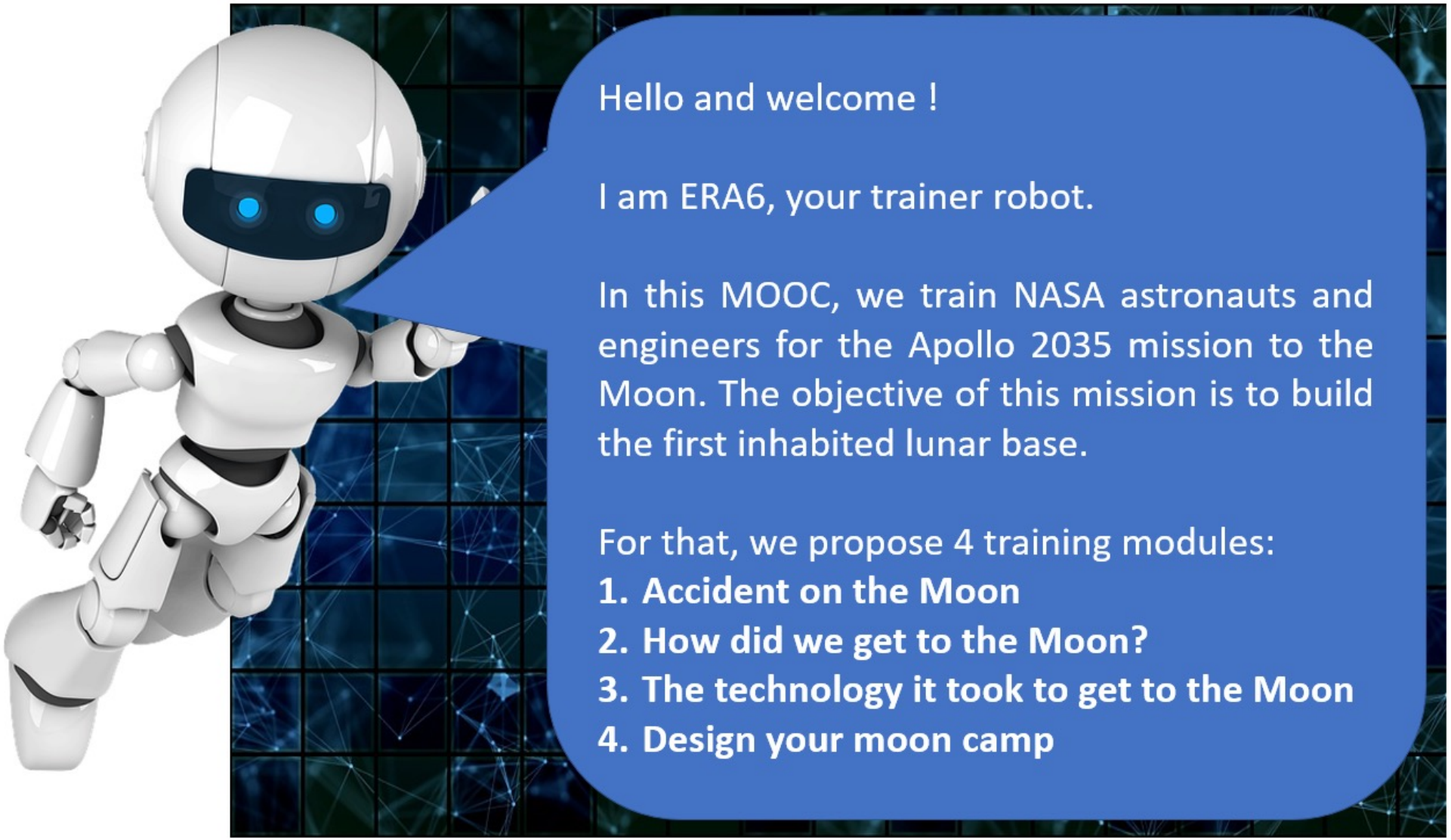
Partnership – Project n°2019-1-SE01-KA201-060604



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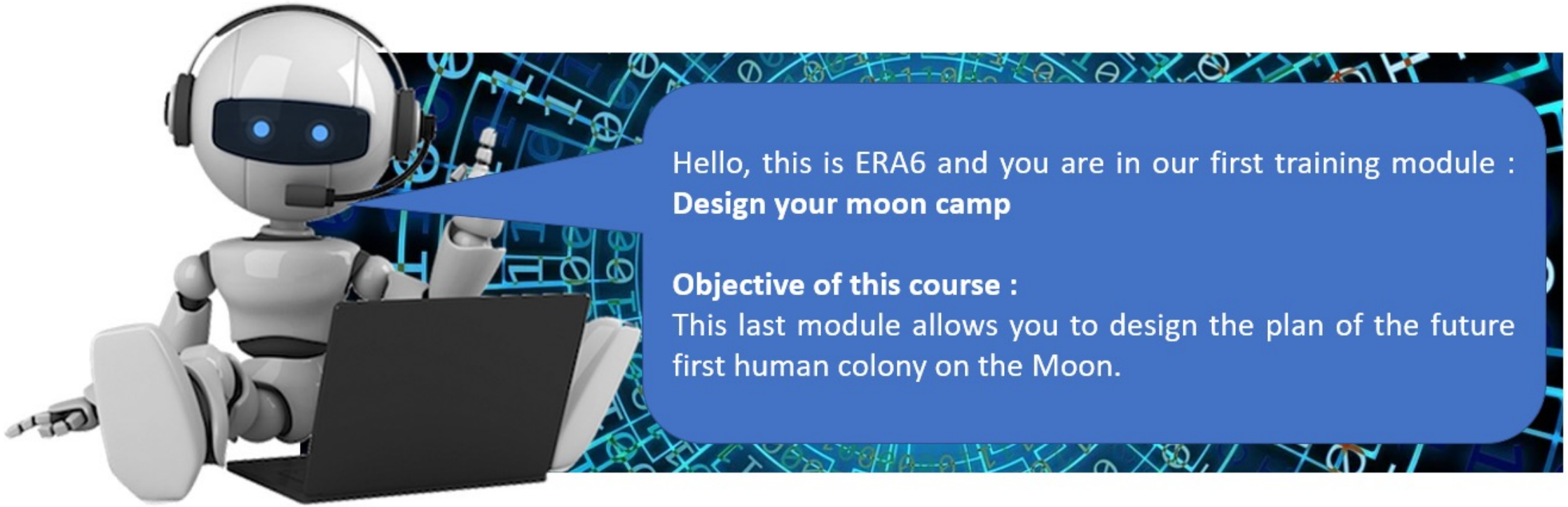
4. Design your Moon camp (extend)



Instructions for the task

You have 1 hour to design the map of your perfect Moon camp ! You are free to draw what you want and how you want but include information to explain your project and how the settlers will survive.

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4. Design your Moon camp (extend)

The settlers face difficult conditions :

- absence of liquid water
- no oxygen in the atmosphere
- high solar radiation
- no food

Modules that can be used :

PLANT MODULE

Green algae in a bioreactor

Species: Chlorella vulgaris

Biology: These algae use photosynthesis to produce their organic matter. Photosynthesis is a process that allows green plants to make their organic matter from mineral matter (gas and water) and thanks to the energy of light. To do so, they absorb CO_2 and release O_2.
Requirements for growth: the material and energy requirements to carry out photosynthesis.

ANIMAL MODULE

Crickets in rearing module

Species: Migratory cricket

Biology: the development of the larvae lasts about 1 month between hatching and the adult stage.
Requirements for growth : Crickets are herbivores. They can feed on algae produced in bioreactors. Development is optimal at 30°C.
They need O_2 for the respiration, just like human species.