

The Conquest of Space

Academic Year: (2022 / 2023)

Review date: 20-05-2022

Department assigned to the subject: Aerospace Engineering Department

Coordinating teacher: SANJURJO RIVO, MANUEL

Type: Courses of humanities ECTS Credits : 3.0

Year : Semester :

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

No specific requirement is needed

OBJECTIVES

The student acquires knowledge about the history of astronautics, the commercial and scientific use of space, as well as notions about the operation of specifically aerospace technologies. As a result, the student will become familiar with the history of exploration and exploitation of space, acquiring basic training in this field.

DESCRIPTION OF CONTENTS: PROGRAMME

Unit 1: The first dreamers and visionaries. Frau im Mond (1929)

Towards space travel.

When the story begins.

Imagining space travel.

Spaceflight literature.

Promoting space travel.

Pioneers and visionaries.

Unit 2: The first missiles. The vengeance weapon V-2 (1944)

Times of Weimar Republic and the Third Reich.

V-2. Rockets and the birth of the Cold War.

Unit 3: The dawn of the Space Age. Sputnik (1957)

Treaty of Rome and Sputnik.

Intercontinental Ballistic Missiles.

International Astronautical Federation.

Rockets and Atmospheric exploration. IGY

Sputnik and the birth of the space era.

Unit 4: The Giant Leap. Apollo 11 (1969)

The Giant Leap.

First Man in Orbit.

Moon Race. Apollo.

Unit 5: Space Cooperation. Birth of ESA (1975)

Post-Moon-race cooperation.

Soyuz-Apollo programme.

ESA example of cooperation.

The International Space Station (ISS).

Unit 6: Using space for Humankind. The exploitation of space

Today's life needs space.

Telecommunications.

Earth Observation.

GNSS.

Space Situational Awareness.

Space technologies back on the Earth.

Unit 7: Looking ahead. Ambition (2015)

Human Exploration of the Solar System.

Robotic Exploration of the Solar System.

Scientific Exploration of the Universe.

Space Tourism.

LEARNING ACTIVITIES AND METHODOLOGY

The course will be followed as a Small Private Online Course. There will be two lectures of external specialists.

ASSESSMENT SYSTEM

% end-of-term-examination:	0
% of continuous assessment (assignments, laboratory, practicals...):	100

The assessment will be based on the student performance on SPOC tests and the presentation of works in relation to the contents of the subject. Class attendance will be also taken into account in the final grade.

Percentage weight of the final exam : 0

Percentage weight of the continuous assessment : 100

BASIC BIBLIOGRAPHY

- Willy Ley Rockets, Missiles and Men in Space, Viking, 1968

