HTS 3080

Syllabus

OXFORD, SUMMER 2014

History of Rocketry

This course introduces students to a global history of rocketry from the 1930s to the 1980s. Its main thematic topics are as follows:

1. Rocketry in Germany, 1930-1945. Wernher Von Braun, Peenemünde and the design, development and production of the A4-V2 missile in Nazi Germany.
2. Rocketry in the US, 1945 – 1969. The career of Von Braun and his team in the United States, culminating in the development of the Saturn V rocket and the lunar landing. The Cold war context of the space race and the decision to go to the moon.
3. Rocketry in the Soviet Union, 1945-1957. The role of Korolev and Glushko in the development of the Soviet missile program, and the launch of Sputnik. The place of German rocket engineers in the Soviet program.
4. Rocketry in Western Europe, 1960 – 1985. The formation of ELDO (European Launcher Development Organization), and the failure of the Europa rocket programme. The emergence of ESA (the European Space Agency) and the development of Ariane. The competition between Ariane and the US Space Shuttle.

Books Used:

A. Michael Neufeld, *The Rocket and the Reich. Peenemünde and the Coming of the Ballistic Missile Era* (New York: Free Press, 1995).
B. Walter McDougall, *...The Heavens and the Earth. The Political Economy of the Space Age* (Baltimore: JHU Press, 1985).
C. Roger Launius, *A History of NASA* (Krieger: Malibu FL, 2000).
D. Asif Siddiqi, *Sputnik and the Soviet Space Challenge* (NASA, 2003).
E. John Krige and Arturo Russo. *A History of the European Space Agency* (Noordwijk: ESA, ESA SP-1235, 2000), 2 volumes.

BOOKS TO BUY: There are NO books to buy. All required study material will be made available in Oxford at a cost of about £10.

LEARNING OUTCOMES At the end of this course students should

a) have a general understanding of the history of rocketry in the regions studied
b) be able to describe the historical origins of the US-Soviet space race
c) know the role of the US in the history of the European rocket program
d) understand the dynamics of European integration as seen through the lens of European rocketry.

ASSESSMENT: Assessment is based on three examinations counting 30%, 30% and 40% towards the final grade, and class attendance (see below).

START TIME OF THE EXAMINATIONS: Examinations will start promptly on time. Late arrivals will be tolerated up to a maximum of ten minutes after the start of the exam. Students who arrive more than 10 minutes late will be deemed to have failed the exam (0%): a second exam covering the same material will NOT be arranged.

ATTENDANCE POLICY: Attendance in class is obligatory. The register will be taken every day. Two absences without good reason are permitted. After that, each absence from class without good reason is punished by the loss of 5%.

ACCOMMODATING DIABILITIES: If you have or acquire any sort of condition that may require special arrangements please let the teacher know at the start of the session.

ACADEMIC CONDUCT: All students are expected to conduct themselves in accordance with the policies of the Georgia Tech Honor Code with respect to conduct and academic honesty. Anyone engaging in acts that violate these policies, such as plagiarism or cheating, will be penalized.

John Krige
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