HTS 4823

**Syllabus**

**SUMMER 2012**

# History of Rocketry

**.**

This course introduces students to the 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 rocket in Nazi Germany.
2. Rocketry in the US. The career of Von Braun and his team in the US, the Sputnik shock, the birth of NASA, the Apollo program and the Space Shuttle.
3. Rocketry in the Soviet Union, 1945-1957. The role of the captured Germans, the rise of Korolev and Glushko, the Sputniks.
4. Rocketry in Western Europe, 1960-1980. The formation of ELDO (European Launcher Development Organization) and the failure of the Europa rocket in 1971. The launch of ESA (European Space Agency) and the success of Ariane.

**SELECTION OF BOOKS USED.**

Michael Neufeld, *The Rocket and the Reich. Peenemünde and the Coming of the Ballistic Missile Era* (New York: Free Press, 1995).

Walter McDougall, *The Heavens and the Earth. The Political Economy of the Space Age* (Baltimore: Johns Hopkins University Press, 1985).

Roger Launius, *A History of NASA* (Malibar: Krieger, 2000).

Asif Siddiqi, *Sputnik and the Soviet Space Challenge* (NASA 2003).

John Krige and Arturo Russo, *A History of the European Space Agency* (Noordwijk: ESA SP-1235, 2000), 2 volumes.

**BOOKS TO BUY:** There are NO books to buy. All required study material will be made available in Metz.

**ASSESSMENT:** Assessment is based on two evaluated in-class exercises (5% each) and two examinations, one midterm, one final, each counting 45% of the final grade.

**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, absence from class without good reason is punished by the loss of 5% each time there is a no-show.

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

**LEARNING OUTCOMES:**

-- Students will demonstrate the ability to describe the political, economic, and social forces that influenced the development of rocket technology in different national contexts (Germany, US, USSR, and Western Europe).

-- Students will demonstrate an understanding of the political and social contexts of the Cold War influenced the development of rocket technology in the mid-twentieth century.

**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 severely penalized.

John Krige

Kranzberg Professor