

STSC 2418-401: Engineering Cultures

- Tuesday and Thursday, 3:30 PM-4:59 PM -

Prospectus, Professor Adelheid Voskuhl

All plans outlined here are preliminary and subject to change as circumstances change.

Modern engineering, technology, science, and medicine converge with each other in countless places, landscapes, institutions, and households. The profession of the engineer has been distinct from that of the scientist, and the “doctor,” since its inception in the 1880s, however. In our class we trace overlaps and boundaries among engineers and other key experts of modern society, government, and public health, covering spaces in the Americas, Asia, and Europe. We explore rivalries, the roles of management and the state, class status and prestige, and we listen to engineers themselves and their understandings of their roles, functions, and purpose in modern societies. We cover fields such as civil engineering, mining, chemical-industrial engineering (including pharmaceuticals and oil refinery), mechanical engineering and machine design/maintenance, computer science, and the engineering of information technologies. No pre-requisites, no prior knowledge required.

Course materials include writings by engineers themselves (technical as well as artistic writing); texts about engineers written by non-engineers (such as government agencies and business managers); current discussions in the social sciences of engineers and their roles in society, business, and government; historical and contemporary discussions about engineering education; historical and contemporary writings in engineering periodicals; archival materials from Penn’s Engineering Schools; and popular treatments of engineers’ images and self-images in films such as *Apollo 13*, *Mission Impossible*, and *The Social Network*.

Course Activities:

We meet twice a week: a lecture on Tuesday and a group discussion on Thursday. Please come prepared on Thursdays with texts read carefully and films watched closely. There will also be a few excursions to archives and sites of engineering institutions on or near the Penn campus.

Requirements and Grading:

There are three assignments (two regular analytical essays interpreting the readings, one photo essay of an excursion) which each make up 20 percent of the grade. Class participation in the form of discussion contributions, as well as scheduled individual meetings with the instructor, make up the remaining 40 percent of the grade.