A New Paradigm for the First Two Years of General Education: The Integrated Curriculum for A Science or Engineering Program of Study

The Humanities Component

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Four Sections of the Humanities

Four distinct Humanities courses and a further history course are offered in the Integrated Curriculum in Engineering at ERAU. These serve as a basis for the general education component for engineers and may well do so for science students and for virtually any curriculum.

The four Humanities sections are Introduction to Composition and Literature (HU-122, Freshman English I); Themes in the Humanities (HU-145, Freshman English II); Speech (HU-219, Public Speaking); and Technical Report Writing (HU-221). In their second semester the students also study a concentrated semester course in World History, SS-110, taught by Professor James Libbey of the Department. This course is a standard ERAU offering, but it is also slanted in many ways to support the sciences. These courses are distributed through four semesters, covering two years of academic work.

Integrating the Humanities and Technological Components

These Humanities courses are integrated to varying degrees into the ICE program. The Freshman English I (HU-122) is most integrated, for it covers several topics and styles of value in physics and engineering. In addition to covering many general and literary topics, as offered in the valuable Norton Reader and assorted literary texts, including a novel, the course provides direct examples of writing a laboratory or technical report, discussions of ethics, basic logic, some history of science, and the basics of the scientific method. These coordinate well with many of the engineering and physics topics through the term. One of the first diagnostic readings is an article from a physics journal surveying the development of Harriot’s Law of optics. The first diagnostic writing is a survey of student ten-year goals, which feeds their first lessons in AE-101, a course designed to promote effective studies and career planning.

The Freshman English I course stresses mostly writing well and clearly. Many rhetorical topics and strategies are discussed and practiced, with about half the writings conducted as team work. A sample research paper is a team assignment, and all their work is discussed and explained online in a complex Web course for which each student must have a laptop computer. The hour examinations, which are primarily subjective or essay tests, are individual tasks that also demand a large amount of individual writing.

Themes in the Humanities (HU-145, or Freshman English II) focuses on the rationality of a few major periods, like the Greeks and Roman, the Enlightenment, the Romantic Age, and the middle of the twentieth century. Rationality, of course, stresses the scientific and philosophical backgrounds and their reflection in the literature and other arts of the periods. The basic source for this course is a two-volume CD-ROM on art history, and the whole course, like all the others, is explained in several files on a Website. This course somewhat supplements the World History course that the students take at the same time.

Speech and Technical Report Writing are similarly integrated, although perhaps not to such an intimate way as Freshman English I. Nevertheless, Technical Report Writing can be, at the student or team option, closely related to an engineering or other scientific problem relevant to their major curriculum. In both course students further practice using their computers for presentations and research.