

# A Collaborative Approach Toward Fostering Information Literacy In Freshman Engineering Students At Drexel University

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## Collaboration

The nature of collaboration is such that it involves networking with students, faculty, and the subject librarians. All of the subject librarians at Hagerty teach the engineering workshops. In that sense, the first nature of the collaborative activity is among the professional library staff themselves. With active feedback from the Associate Director of Freshman Humanities Program, faculty from the tDEC design team, and the library staff, teaching materials, web pages for the class, powerpoint presentations and the schedules for the classes are planned. The schedule requires that approximately 25 workshop sessions be conducted in the second week of the winter term. In co-ordination with the Associate Director of Freshman Humanities Program, both the engineering librarian and the information literacy librarian design the instruction, activities, and consultations with the Freshman engineering students about their projects. Since the students are required to work in teams, effective collaboration among the team members is crucial for quality design projects.



## Asynchronous Learning

The library provides a guide to assist students with research for the course. Students use this guide [The Drexel Engineering Curriculum \(TDEC\) Class Guide \(HUM 107\)](#) to identify key resources. The face to face workshop provided by the library is meant to alert the students to what resources are available, and how to use them effectively. As the students explore multitude of engineering databases, electronic books, and web resources, they begin to formulate specific questions for the engineering librarian, who they contact through email, and telephone calls. These contacts often lead to the consultation described next.

## Individual and Group Consultations

The Design project requires in-depth research on the topic that the students have chosen for their group project. Students work in groups of four, collaborating on various facets of the project topic. Throughout the project, students are required to consult variety of sources. Each member of the group selects a particular section of the project identified earlier during their group meetings. During the course of the project, as they begin to realize the complexity and the wealth of resources available, the need for expert help from the engineering librarian becomes apparent.

The face to face class provides them with the initial exposure to the variety of engineering resources available to them. Many times they find this information overwhelming since at the freshman level, this is the first time they become aware of the enormous number of electronic resources available. Databases such as Ei Compendex, IEEE Xplore have unique features, and varied scope and coverage. Because of the complex nature of the project involved, they need to consult many appropriate resources and not just one or two. As a result, even after the class, students need to consult with the librarians in order to utilize the available resources efficiently. Students come as a groups or individually to consult with the librarian.

Both individual and group consultations with the engineering librarian are crucial in their hunt for information. All faculty teaching various sections emphasize the importance of learning to consult with the engineering librarian. During the consultations, both the librarian and the team brainstorm together and explore alternative routes to tackle their design problems.

## Evaluation and Assessment

Students are required to submit the work cited section of their final report to the engineering librarian. This year is the first time that we began experimenting with this, and we are still in the process of collecting student bibliographies. We would like to try to assess the quality of the students' sources, and how well they relate to their design projects. We will also examine whether they include only free web sites or also include scholarly papers, books, ebooks, patents, standards and codes when applicable. Here we show an exemplary bibliography from a project group that worked extensively with the librarian. While some students have found useful scientific references from library's subscription based databases, many students still only rely on free web resources.



## Future Directions

In the future, we aim to find if there is any relationship between the students choice of information sources, and the quality of their final design projects. We hope to incorporate some kind of measure of the resources used. For example, the librarian gives a partial credit to the citations used, and see if it impacts the final grade. We will need to work harder toward having students realize the importance of what they cite, how they cite, and that their resources need to come from variety of sources and not just the free web. We believe that the strong, collaborative network we have built with the faculty, students, and the staff, will help identify the problem and develop creative steps to improve information literacy skills among students. This will be our next goal for the upcoming year.