

# Technology Courses That Can Recruit Nontechnology Students

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## **Abstract:**

Technology plays an important role in our daily lives such as transportation, shopping, communications, entertainment, etc. In this paper we will present how to expose non technology students to how technology is integrated in our daily lives. As they realize its impact and that it is not complicated they become intrigued by it and therefore want to learn more about it. This causes them to want a more in depth understanding of different aspects of technology. As a result, this has become an impetus for some students to take additional technology courses and some have even changed their major to technology oriented fields. Some other students want to take more technology oriented courses because they now see that it is something that they need to know since it has such a large impact on society and their future careers.

## **Introduction:**

General education is an important educational component for all undergraduate students and most colleges do put a big emphasis on it. But, one thing that is frequently missing from this general education is giving students a basic understanding of technology, its impact on society and how it is integrated in our daily life. In fact, technology is so important that the state of NJ requires high school technology teachers to be certified in technology education. For these reasons it is important to have a course in an undergraduate program with an emphasis on technology and how it is applied. It also helps expose students, who normally wouldn't be, to how technology works.

Most high schools throughout the country integrate technology and computers in their curriculums. Some go as far as offering technology education courses where students are exposed to manufacturing, robotics, structural engineering, printed graphic and photographic communications, telecommunications, computer networking, transportation, energy, other forms of technology, and how a person would design this technology and the process involved. Frequently they get the students involved with robotic and computer competitions. The main purpose of these courses is to expose students to various technologies with the hope that some will pursue that as a career and enroll in a technology oriented educational program and hopefully start a technology

oriented career. But, these are only elective courses. So, the amount of students exposed to this is limited.

Another opportunity to get students exposed to technology fields would be to require undergraduate student to take a technology/computers in society course to meet a science elective in their general education requirement. They would not only learn how technology is used in society, but it might also spark enough of an interest in some students where they might want to pursue that as a career or take additional courses in it.

### **How it got started:**

The Technology Department at Kean University developed a course called *Technology and Information Systems in Modern Society* that would expose students to how technology impacts all that they do in their daily lives. Representatives from the Technology Department then proceeded to educate the decision makers in the liberal arts departments that it would be in their students' best interest to be exposed to how technology will impact them in their career, their job, their lives and society in general. They did not even have to give up a course. It could be taken as a science and technology elective. A student could take this course instead of physics, biology, chemistry, geology, etc.

### **The course:**

The course that was designed to meet this need is called *ID1400: Technology and Information Systems in Modern Society*. Its objective is to cover a broad range of technology systems in academic, industrial, and business settings. Students will be exposed to the knowledge base of technology in the past, present and future of society.

The general theme is to show students how they can use technology to help them in their personal and professional lives, especially their professional lives. If students are exposed to and learn various technologies, and how technology can help them in their jobs, then they will differentiate themselves from their coworkers and will be more likely to advance or not be let go if there are job cuts. The class also helps them become savvier computer users, so they are not as dependant on others. They can also feel more comfortable finding a solution for their needs by themselves.

#### Computer hardware:

- What is inside a typical computer

- How it works

#### Computer software:

- Computer platforms

- How applications they might not normally use can help them

- What applications they might need to use in the workplace

#### Digital entertainment:

- How it works

- Digital cameras

- Digital video cameras
- The manipulation of the information from them
- Data networking
  - Networking fundamentals
  - Network Architecture
  - Network components
  - Wireless
  - How the Internet works
  - Protecting networks
- The vast uses of the Internet:
  - Communications
  - E-commerce
  - Web 2.0
  - Perform better Internet searches
  - Determine how a web site or an online article has reliable information
  - How the Internet and data networks work
  - Online annoyances
- Using the Internet safely
- Mobile computing:
  - How mobile technologies work
  - Cell phones
  - Portable media players
  - PDA's
  - Convergence
  - Notebook computers
- Databases:
  - Their purpose
  - How students can use them
  - Various types of databases
  - The perspective changes according to the user
  - Very large database environments: Data marts, warehouses, mining

### **Projects:**

Various ideas for projects have been tried. The least effective have been writing a paper on something that the instructor says. It is just another boring paper to write. More interesting projects are hands-on. These projects have to do with grouping students together to investigate a technological aspect of their major.

Another type of project has been where students were split up into different groups and they have to debate a subject where they need to learn about some technology. Students in different sections have also been brought together so that they can interact with each other on a project.

Projects can also entail educating students on something that they might have use for in a future job, like creating a database, or how to use the latest Internet technologies like blogging and programming their own websites.

Some of these projects have piqued some students' interest to take technology classes, like *Web Page Design*, *Data Communications* and *Computer in Technology*. Other students have decided to switch to a technology field, like telecommunications.

### **Successful Course:**

We started with two sections and within a short period of time now we had to increase it to 10-12 sections each semester. They are usually all closed within the first few days of registration. If we were to open another 5-6 more sections then they too would probably quickly fill up. Presently we have a backlog of students for the classes.

The course has met its objectives as well. The students are exposed to various technologies that they were not familiar with before. They learn how to use them for their future jobs and they become more productive. It is more applicable to their degree than a regular science course would be. It has worked out well for the technology areas as well. Students express interest in various course topics and how it is related to their major of study. Enough interest was built up that they took several technology courses. Some students even changed their majors to a technology field.

### **Conclusion:**

Offering a course on technology for non technology majors serves multiple purposes. It helps educate non technology students in how to use technology so that they can be more productive in their careers and lives. Isn't that really why we educate students, so that they can improve themselves? This new course also helps expose these students to topics in technology and its application in a non threatening fashion. An additional benefit of this course is that it exposes non technology students to technology subjects in such a way that it piques their interest to the point where they would like to either take more technology classes or change their major to a technology field.