

The Knowledge Bank at The Ohio State University

Ohio State Engineer

- Title:** My Extra Year at the University
- Creators:** Swartz, J. Robert
- Issue Date:** Jan-1934
- Publisher:** Ohio State University, College of Engineering
- Citation:** Ohio State Engineer, vol. 17, no. 3 (January, 1934), 6.
- URI:** <http://hdl.handle.net/1811/35095>
- Appears in Collections:** [Ohio State Engineer: Volume 17, no. 3 \(January, 1934\)](#)

My Extra Year At the University

By J. Robert Swartz

As a part of their initiation, the pledges of Tau Beta Pi are required to present an essay on a subject chosen by the initiation committee. This was selected as the outstanding essay by the Department of Engineering English. We reprint this with the kind permission of Mr. Swartz and Mr. Richard Lee, who had charge of the essays.

THE four-year engineering curriculum, such as that used at the Ohio State University, has one grievous fault in that while it includes practically everything necessary for an undergraduate training in the several branches of engineering, it is almost totally lacking in opportunities for the student to take a number of other courses which are very essential to a complete education. In some engineering schools this fault is being overcome by lengthening the undergraduate curriculum to cover five years. In this way provision is made for a more wide and varied selection of electives. Until this plan is adopted here, the only way in which an engineering student may take the courses which he wanted and was unable to obtain during his undergraduate years is to spend two or three extra quarters in school after he has received his degree.

I have been seriously considering this idea ever since I enrolled in the university; and if the ravages of the depression do not prevent it, I intend to carry it out. The selection of courses to be taken during this extra year requires a great deal of thought and planning. While I have not definitely settled upon the subjects I intend to take, I have compiled a list from which I shall probably choose them. In this discussion I shall present the outstanding courses which I consider necessary and my reasons for selecting them.

The chances are that most of the engineering graduates will eventually find themselves engaged in the more commercial branches of engineering rather than in pure research or design. For this reason, I believe that at least a few elementary commercial courses would be invaluable. Foremost among these, in my mind, is economics. The United States is turning more and more to the judgment of the trained economist, and the rest of the world will not be long in following. In order for a man to be able to keep in stride with the times intelligently, it is becoming increasingly necessary for him to have a reasonably firm grasp of the fundamental principles of economics. For this reason, I feel that I would be wise to take two or perhaps three quarters of economics.

No engineer intends to become a bookkeeper—far from it. But it is of prime importance to the engineering executive that he have some conception of the principles of accounting. This knowledge should be at least broad enough to enable him to read intelligently a balance sheet, and auditor's report, or a yearly report. In the past,

this knowledge has been acquired by apprenticeship in the bookkeeping department. At present, however, the engineering graduate who is working toward an executive position has a very great advantage if he has had some training in accounting. I am sure that my final list of courses will include two quarters of accounting.

A knowledge of law is an invaluable asset in any business or profession, and engineering is no exception. My real desire is to be able to take a law degree within the next ten years. However, from the standpoint of the one extra year, I feel that at least one law course should be included. The one course which is perhaps the most indispensable to the engineer is the one dealing with contracts.

One thing in which the regular engineering curriculum is totally lacking is the opportunity for studying the more cultural subjects. The engineering attitude is a little too prone to be scornful of culture as something unnecessary, inefficient, and unprofitable. Increasing emphasis, however, is being placed on the engineer's ability to mingle socially; and a little cultural education is a distinct advantage in gaining this end.

A foreign language is a subject which combines cultural and economic advantages. Spanish, in particular, is doubly valuable in this way. A great many engineers are called upon for work in South and Central America. A knowledge of Spanish, while not entirely adequate in itself for a full understanding of the patois of these regions, is nevertheless a great help in mastering the Hispano-American tongues. For this reason, I have included two or three quarters of Spanish in my tentative list.

For any purely cultural subjects which I might find time to take, I have included psychology, history, and sociology. Psychology, especially, is valuable training in the understanding and handling of people as well as being an excellent conversational subject. History and sociology are valuable mainly as aids in understanding and analyzing current events and their relation to current problems.

In addition to these courses outside the scope of the College of Engineering, there may be some electives in the engineering curriculum which I shall be unable to take before graduation and which I feel that I should have. These should certainly be worked in, as, after all, the primary purpose of my education is to become a competent engineer. For the most part, however, I think that I will be able to take these courses this year.

As I have said, this list is merely tentative. It would, of course, be utterly impossible to cover it entirely in three quarters. My next problem will be to eliminate those which will be the least necessary, a task which will probably be a herculean one. The happiest solution would be to remain in school as many quarters as it would require to take them all. As this plan, however, would be economically somewhat unsound, I will probably give preference to the economics, accounting, and law. The more purely cultural subjects may be replaced to some extent by outside reading and contacts.