

The Choice of a Course.

At this time of year the first-year student of the Institute is apt to be thinking seriously as to which of the thirteen courses of the Institute he ought to pursue, if, indeed, he has not already made up his mind, before coming. In this respect he has greater freedom than the student in foreign technical schools, where the student must ordinarily decide before entering whether he will take one or another of the courses offered. While it is not possible to give any specific advice in this matter which will apply to all students, or perhaps to any large number of them, nevertheless a few general suggestions may be helpful.

First of all, a student will need to disabuse his mind of the idea which many have that these are separate and sharply divided courses. There is no such sharp line of division between many of the courses. The whole idea of the Institute rests upon the fundamental theory that the first two years, which are in large measure common to all courses, serve as a basis for them all; but even outside of this, there is no sharp line of division between civil engineering and mechanical engineering, or between mechanical engineering and electrical engineering, or between electrical engineering and mining engineering, although each has its distinctive features.

In a certain sense civil engineering is the basis of all, since it deals with the mathematical foundation and the general problems of surveying and the strength of materials, which enter into all branches of engineering; but with our increasing differentiation of professions, civil engineering has come to mean a less general preparation than it once did.

This fundamental fact being granted, and understanding that all these courses have much in common, the question of which one is most available will depend chiefly on two things. First, on one's own belief in his fitness for one kind of work, and second, on the general outlook which he may believe exists for men in this branch of engineering or technical work.

As to the first of these, the candidate himself ought to be able to speak more certainly than any one else can speak for him, although I am bound to admit that this is just the difficulty which many men find. Doubtless it is true that, for the average

man of fair ability, any one of a dozen occupations or professions may be equally available, and that his success would be about the same in any one of them; but the question of the personal fitness of a student for one or another is one which he himself can best settle, and concerning which I doubt if any one can give him any practical advice.

One element of choice which influences many in their attitude to this or that branch of engineering is the character of the life which its practice may impose. Thus, some branches of engineering will almost inevitably call for much travel and more absences from home than will some others. As to the opportunities for employment and promotion in the various branches of engineering and technical pursuits which are open to the Technology student, one can say quite frankly that the well prepared man can find an opening in any of them, and there is very little choice as to the readiness with which this opening may present itself. As far as we can foresee, the future of this country is to have a rapid physical development for a number of years to come. There may be temporary periods of financial depression, during which the onward march will be checked; but these, in the nature of things, will be but temporary. Technical graduates who are well prepared will find openings for advancement in whatsoever fields they may be masters of.

In addition to our own country it is likely that great opportunities for the engineer, for the chemist, for the biologist, will be found in China, Manchuria, and the eastern possessions of Russia. All this region is likely to see, in the next twenty-five years, a physical development which is most striking; and American engineers will be, of all others, most welcome. For this reason, if I were myself beginning engineering, I should learn Russian.

To sum up, the decision which must be made between different courses offered by the Institute must in the end rest largely upon the personal estimate of the student himself. If he has clearly defined ideas of what he wants to do, the question answers itself. If he has no such clearly defined ideas, then he may be sure that he cannot go far wrong to take any one of these engineering courses, which overlap and interlace each other, and all of which lead, if they are thoroughly followed out, to excellent opportunities in life.

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