

# The Canadian Engineer

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## MILITARY STATUS FOR STUDENTS

CO-OPERATING with the presidents of all the universities and colleges in the United States, Secretary of War Newton D. Baker has announced that military training shall at once be instituted in all such institutions, to the end that students, being thus offered by the government a definite and immediate military status, may recognize the duty to continue their education rather than to enlist prematurely in active service.

The details of the plan remain to be worked out, but the War Department has announced that it will be comprehensive and that it will begin with the next college year, September, 1918.

Military instruction under officers and non-commissioned officers of the army will be provided in every institution of college grade which enrolls for the instruction 100 or more able-bodied students over the age of eighteen. The necessary military equipment will, so far as possible, be provided by the government. There will be created a military training unit in each institution. Enlistment will be purely voluntary, but all students over the age of eighteen will be encouraged to enlist. The enlistment will constitute the student a member of the army of the United States, liable to active duty at the call of the president. It will, however, be the policy of the government not to call the members of the training units to active duty until they have reached the age of twenty-one, unless urgent military necessity compels an earlier call. Students under eighteen and, therefore, not legally eligible for enlistment, will be encouraged to enroll in the training units. Provision will be made for co-ordinating the Re-

serve Officers' Training Corps system, which exists in about one-third of the collegiate institutions, with this broader plan.

This new policy aims to accomplish a two-fold object: first, to develop as a great military asset the large body of young men in the colleges; and second, to prevent unnecessary and wasteful depletion of the colleges through indiscriminate volunteering, by offering to the students a definite and immediate military status.

Should not a similar program be evolved for all Canadian colleges, especially those devoted to the education of engineers, chemists, physicians and other professional men whose services are essential to the welfare of the country?

## OUTPUT AND CONSUMPTION OF COAL

IN 1913 there was mined throughout the world about 1,400 million tons of coal, according to statistics compiled by Prof. F. B. Burstall, of Birmingham University. Of this total, about 600 million tons were used for metallurgical purposes and 300 million tons for the production of power, says Prof. Burstall.

Mr. Geo. S. Rice, of Washington, D.C., in a paper read last year before the American Institute of Mining Engineers, estimated the world's coal production in 1913 at 1,330 million tons, as follows:—

	Tons.
United States .....	513,000,000
Great Britain .....	290,000,000
Germany .....	275,000,000
Austria-Hungary .....	54,000,000
France .....	40,000,000
Russia .....	32,000,000
Belgium .....	22,000,000
Asia .....	47,000,000
Africa .....	6,000,000
Other countries .....	50,000,000

1,330,000,000

Mr. Rice estimates that the world's gross coal resources amount to approximately seven million-million tons, consisting of:—

Anthracite and semi-anthracite .....	495,000,000,000
Bituminous coal .....	3,960,000,000,000
Sub-bituminous and lignite coal .....	2,970,000,000,000

The above figures include all coal down to 1 ft. in thickness and 4,000 ft. in depth. The estimates are as follows:—

	Tons.
United States .....	3,960,000,000,000
Canada .....	1,240,000,000,000
China .....	990,000,000,000
Germany .....	416,000,000,000
Great Britain .....	187,000,000,000
Russia .....	59,000,000,000
Austria .....	53,000,000,000
Belgium .....	10,800,000,000

It must be borne in mind that in the above estimated tonnages, as regards the United States about one-half is lignite coal, and in the case of Canada four-fifths is lignite coal.

The coal consumption per head in the United States for the year 1915 varied from 0.35 to 6.52 tons per capita, and by the various industries was as follows:—