

THE UNIVERSITIES AND EDUCATIONAL INSTITUTIONS OF THE NETHERLANDS.

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THE Dutch universities are comparatively modern in point of time, and fully modern in equipment, methods and scientific results. None of them date back to the Middle Ages, but several owe their existence to the struggle for independence in the sixteenth and seventeenth centuries. Thus Leiden was founded as a reward for the heroic struggle the citizens of the town made against the Spaniards.

There are three ordinary state universities, viz., Leiden, Utrecht, and Groningen; a municipal and private university are at Amsterdam, while Delft has a large technical university, Utrecht a veterinary school, and Wageningen an agricultural college. There is also a commercial university at Rotterdam, and a technical university at Bandoerg, Java, which also fall under the scope of this article. It will be seen that the Netherlands are well equipped with the higher institutions of learning, and the fame of some of these has become international. The state universities are governed by a board of curators, who propose appointments and appropriations to the government, while internal affairs are regulated by a senate, composed of the staff of professors. They have five faculties,—theology, law, science, medicine and literary, while the University of Amsterdam has besides these a department of commerce. The Free University at Amsterdam has no science faculty at present, but the technical university at Delft has seven sections: general science, civil engineering, architecture, mechanical engineering and ship-building, electrical engineering, chemical technology, and mining, the other schools having no formal sections.

Ordinary lecture courses are open to everybody at an annual fee of 200 guilders, and become free after payment for four years.

Dutch students must have a certificate of a Latin school or gymnasium, or from an ordinary high school. American students are admitted on graduation with a B. A. degree from the following universities: California, Catholic, Chicago, Clark, Columbia, Cornell, Harvard, Johns Hopkins, Leland Stanford, Jr., Michigan, Pennsylvania, Princeton, Wisconsin and Yale. It will be seen that the Dutch Universities are real universities, and not ordinary American colleges, such as most of our schools. Other languages than Dutch may be used for a doctoral examination or dissertation. Lectures are generally given in Dutch, but at practical work in laboratories, at examinations and promotions the use of French, English or German is admitted.

Holland has a great number of institutions for scientific research, which admirably supplements the universities. Some of the more famous are The Royal Academy of Science, at Amsterdam, which controls the Dutch Central Institute for Brain Research, the Embryological Institute, a prize for Latin poetry, and the Van't Hoff foundation for research in chemistry; the Teyler Society which has a theological branch with a physical laboratory under the direction of the famous professor, H. A. Lorentz, one of the recipients of a Nobel Prize; Society for Dutch Literature; Historical Society of Utrecht; Royal Institute for the Languages, Geography and Ethnology of the Dutch Indies; Royal Geographical Society; Meteorological Institute; Botanical Gardens at Java; Dutch Zoological Association. There are further a number of societies for the promotion of mathematics, medicine and surgery, chemistry, botany, engineering, etc. The principal cities of Holland have a set of fine libraries, chief of which is the Royal Library at the Hague, where is also located the Colonial Library, and the general archives of the Netherlands.

The University of Leiden was founded in 1575, and has about 1500 students, with a staff of about one hundred professors. Its library contains over 775,000 volumes, and has some famous codices. It has a museum for antiquities, ethnography, natural history, geology and mineralogy, a herbarium and a botanical garden, and laboratories for botany, zoology, physics, chemistry, pharmaceuticals, pathology, anatomy, hygiene, bacteriology and physiology, besides an astronomical observatory, and numerous clinics.

In connection with the University is a Fund Society, for the promotion and support of scientific interests, a society for scientific lectures, chiefly for inviting distinguished scholars from abroad,

a fund for promoting the study of international private law and law of nations, also by organizing courses of lectures, a South African fund, a school for tropical medicine and a tropical hospital, the latter being at Rotterdam. At Leiden there are also the municipal archives, the Museum of Antiquities, the Bibliotheque Wallonne, being the Library of the French Reformed Church in Holland, and a Batak-Institute.

The fame of Leiden's great university is indeed world-wide, and it has been called the center of European learning. During the days of the Dutch republic it was easily the first university in the world, and even now it ranks with Oxford, Cambridge, Paris, Berlin, Heidelberg and other famous schools. Some of its present professors are of European fame, and authorities of the first rank in their respective subjects.

The University of Utrecht has also an enviable reputation, dating also from the days of the Dutch Republic. Founded in 1636, it now has nearly 1800 students, and a faculty of over a hundred members. Its library contains over 441,000 volumes, 800 incunabula, and 2400 manuscripts. It includes the libraries of the Historical Society and the Provincial Society of Utrecht, the Central German Library, the Anglia-book Club, and the Library of the Dutch Reformed Church. Besides the usual institutes and laboratories, the herbarium and observatory, the university has an Old-Student Fund for scientific objects, the Stipendium Bernardium, for foreign students of theology, and the fund of Anna Everwijn, also for theological students, from the Paltz, Hungary and Transylvania. Utrecht has also its town and provincial archives, a museum for incunabula, miniatures, and medieval art, a museum of forestry, the royal mint, and a technical laboratory of fisheries. The oldest city in the Netherlands naturally is the home of an institute for mediæval history, and as well for the history of art.

The University of Groningen, in the northern part of the country, is the smallest of the State universities, having about eight hundred students, with a faculty of about sixty professors. It has a library of more than 150,000 books, including some private collections. Among its institutes are one for biological archæology, an astronomical laboratory, with which Professor Kapteyn, the great Dutch astronomer who recently died, was connected, one for experimental psychology, and one for philosophy and history, which has eight branches, six for languages and two for history. The university has two funds for general science and lectures by

scientists from abroad, and connected with it is a society for higher agricultural education. The provincial and town records, and a provincial museum are also located at Groningen. The university was founded in 1614, and shares with Leiden and Utrecht the distinction of having been a center of Dutch and European learning for more than three centuries. Its faculty has many German, French, Jewish and even English names, as have the other schools.

The University of Amsterdam is a municipal institution, having been an Athenaeum since 1632, and was converted into a university in 1877. It has more than 1500 students, and nearly 150 instructors or faculty members. Besides the regular departments it has a school of commerce. The Library includes a Jewish section, Bibliotheca Rosenthaliara, and a Lutheran seminary library, besides that of the Hygienic laboratory and for tropical hygiene. Among its laboratories the university has one for electrochemistry, one for the physiology of plants, and another for histology. It has also seminars for Dutch, German, French, English, Semitics, Geography and History, and an astronomical laboratory. Being in a large modern city, it has the benefit of its hospitals and clinics for its medical faculty, which is very large and complete. It has an extension department, evidently copying American methods, and a school for journalists.

Amsterdam has a great number of public institutions, such as the National Museum, the Colonial Institute, and the Zoological Gardens and Aquarium, as well as a nautica; library and ethnological division. Hugo de Vries, the great Dutch Botanist, whose mutation theory has become a rival to Darwin's natural selection, did most of his work at Amsterdam.

The Free University at Amsterdam is a Calvinist institution, and was founded in 1880 by Dr. A. Kuyper, a former minister of the Crown. It has about 250 students, and a faculty of less than twenty professors. It is stronger in theology than in the other faculties, and has no scientific department except that of medicine. It controls the Institutum Elomicum.

The Technical University at Delft was founded in 1842, and has about 2500 students, with a teaching staff of nearly ninety. It has a full equipment of technical laboratories, among others of microbiology and microchemistry, and ranks among the first in the world. The fame of the Dutch engineer has spread to all sections of the earth, due largely to the very efficient training at Delft, which has already included aerodynamics in its studies.

The commercial University at Rotterdam is quite recent, having been founded in 1913, and has about six hundred pupils, with a faculty of nearly thirty members. Malay is one of the languages taught here. Another school which teaches a specialty is the Veterinary University at Utrecht, which deals with the structures and diseases of the animal world. Its institutes and laboratories are also very modern. On the same plane is the famous school of agriculture at Wageningen, which has a student body of nearly three hundred, and a staff of forty-five professors.

Holland being a colonial power, the University has also a technology of tropical crops, and teaches tropical agriculture. Not a little of the progress in agriculture and dairying in the Netherlands is due to the last two institutions, which has put the country in the very front rank in this regard, teaching many more backward countries, being surpassed by none, and equalled by few.

The Technical University at Bandoerg, Java, while young, illustrates the need for science and engineering in the Dutch East Indies, and shows how the practical Dutch are solving the problem.

It is clear from the foregoing summary that the Dutch are splendidly equipped with a fine set of universities and technical schools, and that the ideal of education stands very high in the minds of the people. What other nation of seven millions can show a like number of large universities and fine educational facilities and institutions or make a better use of them? While other nations have been building for war, the Dutch have built for peace and international good will, not the least through their renowned schools, which have ever been models of democracy, of plain living and high thinking. It is much to be hoped that the proposed exchange of professors between the United States and the Netherlands will be soon in effect, bringing the best of the old world in close contact and association with the new, and renewing the ancient ties between Holland and America.