

education generally is not a mere tinkering with responsions or the previous examination, but to lay down by what avenues of study a university degree may be approached and how the various examinations may be adjusted to them. 'Compulsory Greek' is but an incident of this larger question.—The London *Times*.

STUDENTS OF THE GERMAN UNIVERSITIES.

A CONSULAR report states that this winter semester there are in Germany 39,716 matriculated students, against 39,581 during the past summer semester, and 39,718 last winter. At the beginning of the nineties there were in round numbers 29,000 students, and in the winter of 1894-95, 28,105; the third ten thousand was not reached until the winter 1897-98, when the number was 31,110, since which time there has been a steady increase until now, when the fourth ten thousand has been nearly reached. The numbers of those in attendance at the several universities during the winter semester 1894-95, the present winter semester, and the two previous semesters, were as follows:

University.	Winter 1894-95.	Winter 1903-4.	Summer 1904.	Winter 1904-5.
Berlin	5,031	7,503	6,096	7,774
Munich.....	3,475	4,906	4,946	4,766
Leipzig.....	2,985	3,772	3,575	3,880
Bonn.....	1,518	2,294	2,818	2,568
Halle.....	1,539	1,753	1,780	1,881
Breslau.....	7,293	1,770	1,800	1,870
Göttingen.....	804	1,370	1,581	1,574
Freiberg.....	1,136	1,331	2,029	1,501
Tübingen ..	1,165	1,387	1,581	1,407
Strassburg.....	949	1,333	1,299	1,395
Heidelberg.....	1,028	1,359	1,655	1,371
Würzburg.....	1,347	1,283	1,322	1,295
Marburg.....	800	1,154	1,421	1,276
Münster.....	411	1,204	1,255	1,256
Giessen.....	528	1,071	1,093	1,069
Jena.....	635	816	1,024	953
Erlangen.....	1,131	982	373	942
Königsberg.....	709	925	1,018	932
Kiel.....	504	758	1,000	745
Greifswald.....	750	687	775	705
Rostock.....	420	519	540	556

The number of students pursuing different subjects was:

	Number of Students.	
	1894-95.	1904-05.
Law	7,380	11,777
Philology and history	3,083	8,322
Medicine.....	7,768	5,906
Mathematics and science.....	2,525	5,688
Evangelical theology.....	3,083	2,136
Catholic theology.. ..	1,404	1,678
Pharmacy.....	1,214	1,387
Agriculture.....	883	1,055
Forestry.....	413	1,024
Dentistry.....	282	596
Veterinary surgery.....	70	149
Total.....	28,105	39,718

THE GEOGRAPHICAL AND GEOLOGICAL SURVEY OF SAO PAULO.

THE state of Sao Paulo, Brazil, has since 1886 maintained a Geographical and Geological Survey, the only organization of its kind on the South American continent, which up to the present time has made a detailed topographical map of nearly a third of its territory and made geological contributions that have attracted world-wide attention. Later the government of the same state established an engineering school with the title of Escloua Polytechnica de Sao Paulo that aspires to be, and in many respects is, one of the first of its kind on the continent. A correspondent informs us that about four years ago a group of professors of the newly organized school initiated a campaign to undermine the older organization. The organizer and chief of the survey, Dr. Orville A. Derby, has been forced to resign, being accompanied by the chief topographer, Dr. Horace E. Williams, and by the largest and best part of the topographical staff. A railroad engineer has been appointed to succeed Dr. Derby and the government of the state, while announcing its intention of greatly improving the service, is now wrestling with the problem of mapping its territory without trained topographers.

THE PROGRAM OF STUDIES OF COLUMBIA COLLEGE.

THE trustees of Columbia University have this month adopted a new program of studies for the college on the recommendation of the faculty.

The degree of bachelor of science, as well as that of bachelor of arts, will hereafter be open to students in the college. Candidates for the B.S. degree will not be required to offer any ancient language at entrance or to pursue the study of an ancient language in college, but such students must devote an equivalent time to the study of the natural and physical sciences.

After a student has made 72 points of the 124 required, which he can do in two years, (1) he may take the studies of the first year of the Schools of Applied Science and receive the degree of A.B. or B.S. upon the completion of two years' work; (2) he may take the studies of the first year of the College of Physicians and Surgeons, and receive his A.B. or B.S. upon the completion of two years' work; (3) he may take the studies of the first year of the professional course of Teachers College, and receive his A.B. or B.S. after two years' work; or (4) he may take the studies of the first year in the School of Fine Arts, and receive his A.B. or B.S. after two years' work. When a student has received 94 of the 124 points he may take the studies of the first year of the School of Law; and receive the degree of A.B. or B.S. upon the satisfactory completion of one year's work in this course.

The student who obtains the mark A in any two courses in one half year will be entitled to receive one point of extra credit, provided he has not fallen below the mark B in any of the courses pursued by him during the half year. A student who receives the mark D in two or more courses in any half year is to be given credit for but one of these courses.

Students will be regularly admitted to the freshman class at the beginning of the second half year in February, as well as at the beginning of the first half year in September. The work of one half year may be satisfied by the entrance examinations. Examinations for admission will be held in January of each year. A half year is made the unit for courses.

The first two years are practically prescribed, seven different subjects being required in the freshman year. The prescribed studies

are: English, five hours; French or German, three hours; history, three hours; mathematics, three hours; philosophy, three hours; physical education, two hours; science, three hours; and either Latin or an additional course in science, three hours, according as the student is a candidate for the A.B. or B.S. degree. The courses of the last two years are elective, and as indicated above, the courses of the professional schools may be elected.

SCIENTIFIC NOTES AND NEWS.

A GRANT of \$150,000 has been authorized by the Carnegie Institution for the Solar Observatory on Mt. Wilson, and it is expected that the first equipment will cost about twice this sum. The present staff of the observatory is: George E. Hale, director; G. W. Richey, astronomer and superintendent of instrument construction; Ferdinand Ellerman, assistant astronomer, and Walter S. Adams, assistant astronomer. The address of Messrs. Hale and Richey is Pasadena, and the address of Messrs. Allerman and Adams is Mt. Wilson. Professor Barnard is also at work temporarily on Mt. Wilson with the Bruce photographic telescope of the Yerkes Observatory.

PROFESSOR F. L. O. WADSWORTH has resigned his position as director of the Allegheny Observatory because of the lack of funds required to properly carry on the work of that institution. For this reason all work has been suspended at the observatory for more than a year, except that of taking routine time observations. Professor Wadsworth has been appointed general manager of the Pressed Prism Plate Glass Company and is now at Morgantown, W. Va.

SEÑOR MANUEL GARCIA celebrated his hundredth birthday on March 7 in excellent health. He gave the first performance of Italian opera in New York City in 1825, and was long celebrated as a teacher of singing. His important contribution to science was the invention of the laryngoscope fifty years ago. Señor Garcia was presented with a portrait of himself by Mr. John S. Sargent and received a number of congratulatory addresses with decorations from King Edward, Emperor William and the King of Spain.