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# The PAN AMERICAN UNION

JOHN BARRETT : : : Director General

FRANCISCO J. YÁNES : Assistant Director

In charge of the Section of Education

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## LATIN AMERICAN SECONDARY SCHOOLS

COURSES OF STUDY

---

SECTION OF EDUCATION

MONOGRAPH No. 1



---

WASHINGTON, D. C.

1920





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## CONTENTS.

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	PAGES.
Preface.....	3
Argentine Republic.....	4
Bolivia.....	5
Brazil.....	7
Chile.....	8
Colombia.....	9
Costa Rica.....	11
Cuba.....	12
Dominican Republic.....	14
Ecuador.....	15
Guatemala.....	16
Haiti.....	17
Honduras.....	18
Mexico: Federal District; State of Yucatan.....	19
Nicaragua.....	21
Panama.....	22
Paraguay.....	22
Peru.....	26
Salvador.....	27
Uruguay.....	29
Venezuela.....	30

The number of students coming from the Latin American countries to continue their studies in institutions of the United States has been increasing greatly during the last four years. With the purpose of facilitating the process of their admission to colleges or technical schools, the Section of Education of the Pan American Union has prepared this monograph.

The aim has been to present in a concrete and clear manner the primary and secondary school preparation which these students have had in their respective countries. This is, therefore, a cross-section of the public school systems of the Latin American republics, showing the place of secondary education in its relation to primary and higher education. The important facts presented under each country are: *grades (or years) covered by primary school; secondary school course, specifying subjects, periods per week, length of recitation period, length of school year, and relation of the secondary school course to higher studies.* Incidentally a few other facts, which may be of interest to the student of School Administration, have been added whenever it has been possible to obtain them, using the latest official data available.

Some of the terms employed need brief explanation.

*Colegio, liceo, instituto* and *escuela preparatoria*, are the different names given in Latin America to schools corresponding to the United States high school, and in every case, they mean *secondary school*.

*America* and *American*, used in expressions like "geography of America" or "American History," refer to the whole American continent.

*Bachiller* designates as a rule the *diploma* or *degree*, given upon the completion of the secondary school course. It is sometimes conferred after four, five or six years of strictly secondary education; in other cases after four years of general secondary education and one or two years of professional preparatory work. This means that the preparation necessary to secure the diploma of *bachiller* is not uniform, and that each case must be considered separately; but in no instance does the term *bachiller* correspond to the *Bachelor's* degree granted by United States colleges.

The fact that the Latin American student has, as a prerequisite for admission to secondary school, a primary school preparation of only five or six years, does not necessarily mean that he is not as well prepared in the fundamental subjects as the United States student. There are several reasons for this, among others the phonetic structure of the languages derived from Latin, which do not require so much of the school time to be devoted to spelling. Another reason is found in the earlier psychological development of Latin American children.

The Section of Education established in 1917 by direction of the Governing Board of the Pan American Union is in charge of the educational activities of the organization. It keeps in touch with the educational institutions of the United States and of the Latin American countries. Since the motive inspiring its work is the desire to promote an educational understanding among the countries of the Union, it is ready to cooperate with all institutions and individuals working along similar lines.

This monograph has been prepared by Arturo Torres, A. M., formerly General Superintendent of Education in Costa Rica, now assisting the Section of Education as specialist in School Administration.

FRANCISCO J. YÁNES,  
In Charge of the Section of Education.

# LATIN AMERICAN SECONDARY SCHOOLS COURSES OF STUDY

## ARGENTINE REPUBLIC.

SECONDARY education is imparted in schools called *Colegios Nacionales* (National Secondary Schools) and in private schools called *Colegios Incorporados*, which are under government supervision; there are also *estudiantes libres*, or privately prepared students. The regular pupils pay an annual registration fee of 15 pesos (1 peso = \$0.47). To enter the first year of the national secondary schools a student must be 12 years of age and be certificated from the sixth grade of the elementary schools.

By a decree of the 1st of March, 1916, secondary education was reorganized, and the intermediate school was created; but in February, 1917, the plan of 1912 was reestablished with several modifications, the principal one being the suppression of the sixth year. Thus the present plan consists of five years' work, as follows:

Subjects.	Periods a week by years.				
	I.	II.	III.	IV.	V.
I. Spanish.....	6	3	3		
Literature, literary theory; literature of Argentina and of Spanish America.....				3	
History of Spanish literature.....				3	
Psychology.....				3	
Logic.....					
History: Orient, Greece and Rome.....	4				
Middle Ages, modern and contemporaneous.....		4			
American <sup>1</sup> and Argentine.....			4		
Argentine.....				3	
History of civilization and human culture.....					
Civics.....					
French.....	4	3	3	2	
English.....		4	4	3	
Italian.....				2	
II. Mathematics:					
Arithmetic.....	3				
Arithmetic and book-keeping.....		2			
Plane geometry.....	2	2	2		
Algebra.....			2	2	
Solid geometry.....				2	
Trigonometry and cosmography.....					
Geography:					
Asia and Africa.....	2				
Europe and Oceania.....		3			
Argentina and America <sup>1</sup> .....			4	2	
Biological sciences:					
Zoology and botany.....		3	3		
Anatomy.....				3	
Physiology and hygiene.....					
Physics.....				5	
Chemistry.....					
Mineralogy and geology.....					
III. Drawing.....	2	2	2		
Physical training.....	2	2	2		
Military drill.....				1	
Total.....	25	28	29	31	3

<sup>1</sup>See Preface as to use of words "American" and "America."

The class period is 45 minutes and the school year is about 180 working days. Upon completing successfully the aforesaid course the student receives the diploma of *bachiller* (bachelor).<sup>1</sup>

In Argentina there are 38 *Colegios Nacionales* under the superintendence of the General Inspector of Secondary, Normal and Special Education, with a registration of 11,022 students and an annual budget of 5,453,994 pesos. There are 39 private secondary schools with a registration of 3,288 students; moreover each of the three National Universities, of Buenos Aires, La Plata and Córdoba, has a secondary school department, figures for which are not available. The *Colegio Nacional de Buenos Aires*, connected with the University of that name, is conducted on a different plan from the other national secondary schools. The conditions of entrance are the same, but the course covers a period of six years, at the termination of which the diploma of *bachiller* is granted. It also differs from the others in that their graduates must take an examination for entrance into any of the faculties of the University of Buenos Aires, while graduates from the *Colegio Nacional de Buenos Aires* enter directly. No fixed correlation of studies has been established between this and the other national secondary schools; the case of each applicant is decided on its own merits.

On October 31, 1918, the Minister of Public Instruction presented to the National Congress a draft of an "Organic Law of Public Instruction." In this bill the same 6 years of primary education are left as a requisite for entrance upon secondary education; the latter is reduced to 4 years of common general studies and a preparatory course is established under the jurisdiction of the universities, which shall fix its curriculum, the length of the course and its degree of specialization. The completion of the four years of secondary education will give the student the diploma of *bachiller* and the right to enter the preparatory course.

Data taken from:

Anuario del Estudiante: Cabaut y Cia, Buenos Aires, 1918.

Programas; Cabaut y Cia, Buenos Aires, 1918.

Memoria del Ministerio de Justicia e Instrucción Pública, 1917 and 1918.

Proyecto de Ley Orgánica de Instrucción Pública, 1918.

#### BOLIVIA.

The law governing secondary education in Bolivia is that of December 12, 1908, amended by decree of October 12, 1909, which abolished the 7th year of secondary school work. Subsequently there have been introduced the few changes mentioned later on.

According to the law of 1908 pupils 11 years of age who had passed the first four grades of the elementary school were admitted to the first year of the secondary school. This was modified by decree of September 5, 1918, which established six years of elementary education as the obligatory requirement for entrance into secondary schools.

<sup>1</sup>See Preface as to relative significance of "bachiller" and "bachelor."

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Psychology.....				3	
Logic.....					3
History: Orient, Greece and Rome.....	4				
Middle Ages, modern and contemporaneous.....		4			
American <sup>1</sup> and Argentine.....			4		
Argentine.....				3	
History of civilization and human culture.....					4
Civics.....					3
French.....	4	3	3	2	
English.....		4	4	3	
Italian.....				2	3
II. Mathematics:					
Arithmetic.....	3				
Arithmetic and book-keeping.....		2			
Plane geometry.....	2	2	2		
Algebra.....			2	2	
Solid geometry.....				2	
Trigonometry and cosmography.....					4
Geography:					
Asia and Africa.....	2				
Europe and Oceania.....		3			
Argentina and America <sup>1</sup> .....			4	2	
Biological sciences:					
Zoology and botany.....		3	3		
Anatomy.....				3	
Physiology and hygiene.....				5	2
Physics.....					
Chemistry.....					
Mineralogy and geology.....					6
Drawing.....	2	2	2		2
Physical training.....	2	2	2		
Military drill.....				1	1
Total.....	25	28	29	31	31

<sup>1</sup>See Preface as to use of words "American" and "America."

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<sup>1</sup>See Preface as to relative significance of "bachiller" and "bachelor."

The course of study is as follows:

Subjects.	Periods a week by years.					
	I.	II.	III.	IV.	V.	VI.
<i>Required.</i>						
National language (Spanish).....	5	5	5	4	4	4
Calculation and mathematics.....	5	4	4	4	4	4
History.....	2	3	3	3	3	3
Geography.....	2	3	3	2	2	1
Natural history.....	2	3	3	2	1	1
Physics.....				2	3	3
Chemistry and mineralogy.....				2	3	3
Moral instruction and philosophy.....					1	3
French (see paragraph below).....	4	4	4	4	3	3
English (see paragraph below).....				3	3	3
Drawing and penmanship.....	2	2	2	2	2	1
School games and gymnastics.....	4	4	4	4	3	3
	26	28	28	32	32	32
<i>Optional.</i>						
Manual training.....	1	1	1	2	2	2
Music and singing.....	1	1	1	1	1	1
Religious instruction.....	1	1	1			

The above course of study was modified by decree of September 2, 1918, as follows: (1) The study of only one modern language, French or English, is required in secondary and normal schools, according to the preference of the student; (2) students shall indicate on registering the modern language they wish to take; (3) the two modern languages mentioned shall be taught in every year of the secondary and normal school course, and the daily programs shall be accordingly modified by the proper school authorities.

Upon completing the six years of secondary education the student must take the examination for the diploma of *Bachiller en Ciencias* or *en Letras* (Bachelor of Science or Letters). To enter the law school, both diplomas are required, but only one is necessary for matriculation in the schools of medicine, pharmacy, dentistry, commerce, civil and mining engineering.<sup>1</sup>

The length of the school year is 40 weeks; the class period is 45 minutes, and the number of recitation periods per week should not exceed 26 to 29 in the first years and 30 to 32 periods in the last years.

Secondary instruction is given in schools called *Colegios Nacionales* or *Liceos*, of which there are 14 with an enrollment of 1,795 boys and 338 girls. The annual registration fee is 10 *bolivianos* (1 *boliviano* = \$0.39 gold). There are also independent or private secondary schools, which have the same course of study and regulations as the official institutions, and with a registration of 1,104 pupils.

Data taken from:

Memoria de Justicia e Instrucción Pública, La Paz, 1909.

Memoria de Justicia e Instrucción Pública, La Paz, 1910.

Memoria de Instrucción Pública y Agricultura, La Paz, 1918.

<sup>1</sup>At present there is a strong tendency toward changing the course of study by dividing it into two cycles: one comprising four years of common studies, and another of two years for differentiated and preparatory work.



## BRAZIL.

On March 18, 1915, decree No. 11,530 was issued reorganizing secondary and higher education. By this decree it is provided that: (1) the Federal Government shall continue to maintain the secondary school called the *Collegio Pedro II* (School of Peter the Second), at Rio de Janeiro; (2) the academies (secondary schools) that wish to have their diplomas recorded by federal authorities shall apply to the *Conselho Superior do Ensino* (National Council of Education), so that the latter may appoint an inspector to investigate the length of time that the school has been open, its examinations, laboratories, teaching staff, income and the taxes that it should pay for official inspection; (3) the length of the school year shall be from April 1 to November 15, each course comprising 80 recitations; (4) in order to register in the *Collegio Pedro II* or in those of equal rank, maintained by the States or by private individuals, pupils must be over 11 years of age and pass a written examination showing knowledge of the Portuguese language, and an oral test in reading and its interpretation, elements of Brazilian history, practical arithmetic and geometry, and physical geography; (5) in order to register for higher education they must (a) present a certificate showing that they have completed satisfactorily the studies comprising the academic course of the *Collegio Pedro II*, issued by this school itself or by schools of equal rank supported by the States and supervised by the National Council of Education; (b) must be 16 years old; (c) prove moral fitness; (d) pass the entrance examination, and (e) pay the registration fee.

The curriculum of the *Collegio Pedro II*, which serves as the standard for the other secondary schools, is as follows:

Subjects.	Periods a week by years.				
	I.	II.	III.	IV.	V.
Portuguese.....	3	3	3	.....	.....
French.....	3	3	3	.....	.....
English or German.....	.....	.....	3	3	3
Latin.....	3	3	3	.....	.....
Geography (general).....	3	.....	.....	.....	.....
Geography of Brazil and elementary cosmography.....	.....	3	.....	.....	.....
History (universal).....	.....	.....	.....	3	.....
History of Brazil.....	.....	.....	.....	.....	1
Arithmetic.....	.....	3	.....	.....	.....
Algebra and plane geometry.....	.....	.....	3	.....	.....
Solid geometry and trigonometry.....	.....	.....	.....	3	.....
Physics and chemistry.....	.....	.....	.....	3	3
Natural history.....	.....	.....	.....	.....	3
Philosophy.....	.....	.....	.....	.....	3
Drawing.....	3	3	3	3	.....
Physical training.....	3	2	2	2	.....
	17	20	20	17	13

The student may elect English or German, or he may study both languages, not being obliged to take examinations except in the one that he may choose. Modern languages are taught in a strictly practical manner in order to enable the pupil to read and speak them with facility. Latin is taught in such a manner as to enable the student in his last year to translate any paragraph taken from Cicero's Orations or from Virgil's works.

Those wishing to enter the Schools of Pharmacy or Dentistry, are granted the privilege of taking only Portuguese, French, geography, arithmetic, physics, chemistry and natural history, not being allowed to be examined in more than 4 subjects each year; they are considered as special students.

Data taken from:

Decreto n. 11.530 de 18 de Março de 1915 reorganisa o ensino secundario e o superior. Ministerio da Justiça e Negocios Interiores, Rio de Janeiro, 1915.

Regulamento do Gymnasio Pernambucano, Palacio do Governo do Estado de Pernambuco, Pernambuco, 1915.

Programas de Ensino do Collegio Pedro II para o anno de 1918, Typ. Revista dos Tribunaes, Rio de Janeiro, 1918.

Consolidação da Legislação federal do ensino superior e do secundario por José Bernardino Paranhos da Silva, Rio de Janeiro, 1918.

### CHILE.

To be admitted to secondary studies the student must have passed through the six grades of the primary school; there was formerly connected with the national secondary schools a preparatory course of two years, which was abolished by the new law of compulsory education enacted in September, 1919.

Secondary education was originally organized by the law of January 9, 1879; the course of study then prescribed was modified by decree of January 2, 1912, and during the year 1915 some minor changes were introduced, which have been incorporated in the curriculum given below.

Subjects.	Periods a week by years.					
	I.	II.	III.	IV.	V.	VI.
Spanish.....	4	4	4	4	3	3
French.....	4	3	3	3	3	3
English, German or Italian.....	4	4	4	4	3	3
Mathematics.....	4	4	4	4	3	3
Natural sciences.....	2	2	2	2	2	2
Physics.....				2	2	2
Chemistry.....				2	2	2
History and geography.....	3	3	3	4	3	3
Philosophy.....					2	2
Civics.....					2	2
Religion.....	2	2	2	1	1	1
Penmanship and drawing.....	5	3	3			
Drawing.....				2	2	2
Manual training.....	2	2	2	2	2	2
Gymnastics and singing.....	3	3	3	3	3	3
	29	30	30	33	33	33

French is required throughout the entire six-year course, and the student should also take up a second modern language, which may be English, German or Italian. Drawing is optional in the 4th, 5th and 6th years. The study of religion is not absolutely obligatory.

To receive the diploma of *Bachiller en Filosofia y Humanidades* (Bachelor of Philosophy and Humanities) the student must complete successfully all the studies of the secondary school course and pass the prescribed examination.

Secondary education is free and is given in the *Liceos Fiscales* (National Secondary Schools), which are of two classes: in those of the first class the six-year course is offered, while in those of the second class instruction is limited to three years. By decree of May 18, 1912, the above course of study (for boys' schools) was adopted for the girls' secondary schools, but with such changes as are required by the teaching of domestic arts.

In 1918 there were 42 national secondary schools for boys with a registration of 18,000 students, and 44 for girls with a registration of 11,900. The secondary schools subsidized by the Government had an enrollment of 10,920 pupils and those not subsidized had 6,789.

Data taken from:

Recopilación de Leyes y Reglamentos relativos a los servicios de Instrucción Superior, Secundaria y Especial, Ministerio de Instrucción Pública, Santiago, 1912.

Plan de Estudios y Programas de Instrucción Secundaria, Ministerio de Instrucción Pública, Santiago, 1916.

Memoria de Instrucción Pública, Santiago, 1919.

El Mercurio, Santiago, 12 de Setiembre de 1919.

#### COLOMBIA.

Secondary education is in charge of the National Government and is supervised by the Executive Power. The departments and municipalities, as well as private individuals, can maintain establishments of secondary education, but both public and private secondary schools must apply to the Ministry of Public Instruction for the right to issue the diploma of *bachiller* (bachelor). This right is granted on the following conditions: (1) that the petition have the approval of the proper ecclesiastical authority and that of the Director General of Public Instruction in the Departments and of the School Inspector or Supervisor in the territories; (2) that the official course of study be adopted; (3) that the syllabus and regulations, and the list of teachers be submitted to the Ministry for approval and revision; (4) that no person be appointed as teacher who does not possess certain qualifications; (5) that the school be regularly established and suitably located, with a laboratory equipped for the demonstrative teaching of physics and chemistry; and (7) that it offer the academic course in Sciences as well as that in Philosophy and Letters.

To enter the secondary school the pupil must have passed the six years of elementary education or prove by means of an examination that he possesses an equivalent preparation.

Secondary education is divided into technical and classical. It was organized by decrees 491 of 1904, 229 of 1905, and 1601 of 1916.

The technical course includes the following subjects: (I) religion; (II) Spanish grammar, translation from English and French; (III) universal geography, physical geography, cosmography, universal history and Colombian history; (IV) arithmetic, algebra, plane and solid geometry, trigonometry and accounting; (V) general physics and chemistry; (VI) logic; (VII) drawing.

The classical course comprehends the following: (I) religion (4 years); (II) Spanish language (2 years), rhetoric, with a survey of general literature, and especially that of Spain and Latin America (1 year), French (2 years), English (2 years), Latin (2

years); (III) geography (1 year), cosmography (1 year), ancient history (1 year), modern history (1 year), Colombian history and geography (1 year); (IV) arithmetic (2 years), elementary algebra (1 year), plane and solid geometry (1 year), commercial and official accounting (1 year); (V) experimental physics and chemistry (1 year each), natural history (1 year); (VI) philosophy (2 years) and philosophy of the Spanish language (1 year).

Not more than four subjects can be taken up each year; or five at most if they are easy studies. The subjects required for the *diploma de bachiller* (bachelor's diploma) shall be given for one hour daily with the exception of those that are given in secondary schools where the studies are taught by the progressive method, in which case alternate classes may be given.

To be granted the diploma of *bachiller* the student must have passed all the studies of secondary education and submit to an examination in five subjects, chosen by lot.

Students who follow the technical course will receive the diploma of *Bachiller en Ciencias* (Bachelor of Science), which enables them to enter schools or institutes of a technical character. Those who pursue the classical course will receive the diploma of Philosophy and Letters, which enables them to enter the Faculties of Philosophy and Letters, Law and Political Sciences, Medicine and Natural Sciences, and Engineering and Mathematics. In those secondary schools that give only the diploma of *Bachiller en Ciencias*, but where pupils have also taken the course in philosophy, the diploma entitles them to enter courses in the Faculty of Engineering and Mathematics; and if at the same time they have taken the courses in Latin and philosophy, as fully as required, they may enter any of the University Faculties.

*La Escuela Nacional de Comercio* (The National School of Commerce) of Bogotá is the only secondary school in which the subjects are arranged according to the progressive plan; both courses (the classical and the technical) are included in one plan, which follows:

Subjects.	Periods a week by years.					
	I.	II.	III.	IV.	V.	VI.
Religion . . . . .	2	2	2	2	2	2
Spanish: Composition and grammar . . . . .	2	3	3	3	2	2
Spelling from dictation . . . . .	1	2	2	2		
Philosophy: Logic . . . . .					3	
Metaphysics . . . . .						3
Latin . . . . .					2	1
French . . . . .	3	3	3	3	3	3
English . . . . .			3	3	3	3
Mathematics:						
Arithmetic . . . . .	6	4	4			
Accounting . . . . .				3		
Algebra . . . . .				3	3	3
Geometry . . . . .		1	2	2	2	3
Natural sciences:						
Zoology and botany . . . . .	2	2	2			
Mineralogy and geology . . . . .					2	2
Physical sciences:						
Physics and cosmography . . . . .		1	1	4	4	4
Chemistry . . . . .		1	1	3	3	3
Geography and cosmography . . . . .	2	2	2			
History:						
of Colombia . . . . .	1	1	1	1		
General . . . . .	1	1	1	1	2	2
Penmanship . . . . .	2	2	2			
Drawing . . . . .	1	1	1	1	1	1

In 1917 the number of official establishments of secondary and professional education reached 106 with 12,116 pupils; and that of private establishments, 276 with 20,999 pupils.

Information taken from:

Código de Instrucción Pública, Bogotá, 1911.

Memorias del Ministerio de Instrucción Pública, Bogotá, 1917 and 1918.

Prospecto de la Escuela Nacional de Comercio, Bogotá.

### COSTA RICA.

Decrees of November 28, 1914,<sup>1</sup> divided secondary education into two cycles: the first, three years in length, of general studies, being compulsory for all pupils; the second, two years long, offers special preparation for law, engineering and medicine. To enter the first year of the secondary school the pupil should have finished the five years of primary education and be 12 years old.

In the first cycle of common studies the following are included:

Subjects.	Periods a week by years.		
	I.	II.	III.
Spanish .....	4	4	4
English .....	4	4	4
French .....	4	3	3
Mathematics .....	4	4	3
Geography .....	3	4	3
History .....		4	4
Physics .....			4
Chemistry .....		4	
Natural sciences .....	3	3	
Agriculture .....			3
Hygiene .....	1	1	
Moral and civic instruction .....	2		1
Drawing .....	2		
Penmanship .....	2	2	
Manual training .....	2	2	
	28	30	32

Upon the completion of this first cycle, the studies leading to the *grado de bachiller* (Bachelor's degree), consisting of two years more, may be taken up. These studies are divided into three groups, each designed to prepare the student especially for the career he plans to follow. The studies common to all the groups and the specialized subjects preparatory to engineering, medicine, pharmacy and allied professions, and law, are given in the following tables:

### COMMON STUDIES.

Subjects.	Periods per week.	
	Fourth year.	Fifth year.
Spanish literature .....	4	4
Foreign literature and elocution .....	3	3
English .....	3	3
French .....	2	2
Logic and debate .....	2	2
Sociology .....	2	2
Public administration .....	2	2
Sanitary science .....		3
Agriculture .....		1
Music .....	4	2
Typewriting .....		2
Manual training .....		2
	18	20

<sup>1</sup>See Bulletin, 1915, No. 26, United States Bureau of Education.

## PREPARATORY TO ENGINEERING.

Subjects.	Periods per week.	
	Fourth year.	Fifth year.
Mathematics.....	4	4
Chemistry.....	4	4
Physics.....	4	4
Geology and mineralogy.....	4	2
Drawing.....	2	2
	14	10

## PREPARATORY TO MEDICAL PROFESSIONS.

Philology.....	2	4
Chemistry.....	4	4
Physics.....	4	4
Biology.....	4	4
Anatomy and physiology.....	2	2
Drawing.....	2	2
	12	10

## PREPARATORY TO LAW.

Philology.....	2	4
Historical investigation.....	4	4
History of Costa Rica.....	3	3
Psychology.....	3	3
Political economy.....	3	3
Commercial geography.....	3	3
Mercantile law.....	3	3
	12	10

The recitation period is 50 minutes and the school year 182 days. Secondary education is supported by the Government and imparted in four secondary schools and in the normal school.

Data taken from:

Reorganización de la Escuela Normal y de los Colegios de Segunda Enseñanza, Secretaría de Instrucción Pública, San José, 1914.

## CUBA.

The present system of secondary education was established by Military Order No. 267, June 30, 1900. To enter a secondary school the pupil must be 13 years of age and prove through examinations that he has done the work of the eight years of primary school and is able to read and translate either English or French. For the purpose of preparing the students who are to enter upon secondary education a Preparatory Course has been opened. There is no age requirement for registration in this course, but candidates must show either by examination or by official certificate that they have completed the sixth grade of elementary primary education.

The secondary school curriculum covers a period of not less than four years. The subjects form eight groups; each course covers a school year of eight months, and the class period is one hour.

The following is the arrangement of subjects by courses:

## PREPARATORY COURSE.

*Group A.*—Spanish grammar with composition and derivation exercises; recitation of Castilian pieces, in prose and verse, with an explanation of the same; elementary geography and history.

*Group B.*—Practical arithmetic to ratio and proportions; mechanical drawing; elementary hygiene; rudiments of physiology, zoology, and botany; English and French.

## SECONDARY EDUCATION.

*Group A.*—Spanish grammar and literature; three courses.

*Groups B and C.*—English and French; two courses each.

*Group D.*—Universal geography and universal history; two courses.

*Group E.*—Arithmetic, algebra, geometry and trigonometry; three courses.

*Group F.*—Physics (two courses); chemistry (one course); three courses.

*Group G.*—Natural history, elements of cosmology,<sup>1</sup> introduction to biology,<sup>1</sup> three courses.

*Group H.*—Logic and elements of psychology; civics<sup>1</sup>; introduction to sociology,<sup>1</sup> two courses.

Physical training.

Secondary education is given in the six *Institutos de Segunda Enseñanza Provinciales* (Provincial Institutes of Secondary Education) and by the officially recognized private schools. The former have an enrollment of 2,200 students. The annual matriculation fee is \$12.50. Upon completing the course of secondary education the student receives the diploma of *Bachiller en Ciencias y Letras* (Bachelor of Science and Letters), which enables him to continue his work in the University.

Each Institute is authorized to make its own arrangement of subjects by years. Below is given the course of study of the Matanzas Institute:

*First year—*

Spanish grammar.  
Universal geography.  
Arithmetic.  
English or French (first course).

*Second year—*

Literature (preceptive).  
Universal history.  
Algebra.  
English or French (second course).

*Third year—*

Geometry and trigonometry.  
Literature (historical).  
Logic and elements of psychology.

*Third year—(con.)*

Physics (first course).  
Elements of cosmology (from February to May).

*Fourth year—*

Physics (second course).  
Chemistry.  
Civics (from October to January).  
Natural history.  
Introduction to biology (from October to January).  
Introduction to sociology (from February to May).

Physical training is obligatory for every student in the Institute.

Data taken from:

Colección Legislativa de la Isla de Cuba, Vol. II, 1900, Habana.  
Memoria Anual, Instituto de Segunda Enseñanza de la Habana,  
Año académico de 1909–1910.

Memoria Anual, Instituto de Segunda Enseñanza de Matanzas,  
Año académico de 1914–1915.

Memoria Anual, Instituto de Segunda Enseñanza de Santiago  
de Cuba, Año académico de 1918–1919.

<sup>1</sup>These subjects are studied during one term only; they are optional, except civics, and each diploma shall state whether or not the student has taken them.

## DOMINICAN REPUBLIC.

Executive Order No. 145 issued April 5, 1918, reorganizes public instruction in the Republic, including secondary education. Subsequently the Department of Public Instruction issued Orders 53, 54, 55 and 56, on May 20 and June 4, 1918, complementing the former general order.

For admission to the secondary school the student must have passed through the six years of primary school and have the Official Certificate corresponding to the higher elementary school.

The secondary course comprehends the following four divisions:

- 1.—Section of general secondary studies.
- 2.—Section of Philosophy and Letters.
- 3.—Section of Physical and Natural Sciences.
- 4.—Section of Physical and Mathematical Sciences.

I.—The Section of general secondary studies covers a period of three years with the following distribution of subjects:

*First year—*

Arithmetic.  
Algebra.  
Physies.  
Chemistry.  
Anatomy, physiology and hygiene.  
Spanish grammar (analogy).  
History of Santo Domingo.  
Geography of Santo Domingo.  
Drawing.  
English.  
French.

*Second year—*

Geometry.  
Trigonometry.  
Cosmography.  
Physics and chemistry.  
Botany, zoology.  
Geography of America.

*Second year—(con.)*

Ancient and medieval history.  
English.  
French.  
Spanish grammar (syntax).

*Third year—*

Economics.  
Constitutional law.  
Geography of Europe, Asia, Africa and Oceania.  
Modern, contemporaneous and American history.  
Geology and physical geography.  
Hygiene.  
Rhetoric.  
Logic.  
Drawing.  
English and French.

When the student has completed the above work he must pass an examination and give evidence of being 13 years old. This examination entitles him to the Official Certificate corresponding to the general studies of secondary education, which is prerequisite for admission to any other division.

II.—The studies of the special sections are given in one year each, and include the following subjects:

*Section of Philosophy and Letters—*

Latin.  
English.  
French.  
Philosophy.  
History of philosophy.  
Social ethics.  
History of civilization.  
Literature.  
History of literature.

*Section of Physical Sciences and Mathematics—*

Arithmetic.  
Algebra.  
Geometry.

*Section of Physical Sciences and Mathematics—(con.)*

Trigonometry.  
Astronomy.  
Physics and chemistry.  
Mechanical drawing.  
English and French.

*Section of Physical and Natural Sciences—*

Physies.  
Inorganic and organic chemistry.  
Botany and zoology.  
Biology.  
Geology.  
Astronomy.  
English and French.



After an examination the student receives the Official Certificate corresponding to the respective section and on presenting it to the National Council of Education he receives the diploma of *bachiller* (Bachelor) of Physical and Mathematical Sciences, Philosophy and Letters or Physical and Natural Sciences, as the case may be. These general and special studies of secondary education together comprise the required preparation for matriculation in the University.

Secondary instruction is provided by the Government and is imparted in the Normal Schools of Santo Domingo and Santiago. The school year is 36 weeks long.

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A new curriculum is now under consideration, for the purpose of reducing the present number of subjects.

Data taken from:

Colección de Ordenes Ejecutivas y Reglamentos Administrativos. Edición Oficial, 1919. Santo Domingo.

Colección de Ordenes de la Secretaría de Estado, Justicia e Instrucción Pública. Edición Oficial, 1919. Santo Domingo.

Revista de Educación, Consejo Nacional de Educación, Junio 1919. Santo Domingo.

#### ECUADOR.

A new set of General Regulations for Secondary Education was issued by the National Council of Public Instruction, October 26, 1917, providing as follows:

1. In order to enter the secondary schools the pupil must be at least 12 years old, must have finished the six years of the elementary school and pass the entrance examination.

2. Each secondary school shall have a lower and an upper section, of three years each, and the following subjects shall be taught: (a) *scientific studies*: moral and civic instruction, Spanish, modern languages, history, geography, physical sciences, natural sciences, mathematics, philosophy; (b) *technical studies*: drawing, gymnastics, music. Courses in commercial subjects, surveying, agriculture, telegraphy, education, etc., may be given in some of the secondary schools.

3. That 6 recitation periods per day, of 45 minutes each, shall be the maximum, 30 the maximum weekly program and 36 weeks the length of the school year.

4. That a certificate of lower studies be granted to the students who pass all the subjects of the lower section, and the diploma of *bachiller* (Bachelor) be conferred upon those who complete the six years' course and pass a special examination.

The plan given below was in force from 1914 to 1918, and throws some light on the probable new course of study.

## LOWER SECTION.

*First year.*—Moral and civic instruction; Spanish grammar; arithmetic; physical geography of the five parts of the world, and especially of America; History of Ecuador; French or English; mechanical drawing.

*Second year.*—Moral and civic instruction; Spanish grammar, with study of Greek and Latin roots; arithmetic; political geography of the five parts of the world, and especially of America; ancient history; French or English; personal hygiene.

*Third year.*—Literature (rhetoric and poetry); commercial accounting; astronomic geography; history of the middle ages; French or English; public hygiene.

## UPPER SECTION.

*First year.*—Logic and transcendental philosophy; algebra; botany; modern history; French or English.

*Second year.*—Cosmology and psychology; plane geometry and trigonometry; biology-zoology; physics; chemistry; history of literature, and especially Spanish and American literature; French or English.

*Third year.*—Ethics; elementary law and study of the Constitution; history of philosophy; solid geometry; mineralogy and geology; physics and chemistry (elementary organic chemistry and qualitative analysis); French or English.

Gymnastics and military drill were included throughout the whole six years' course.

Secondary education is given in the *Colegios Nacionales* (National Secondary Schools), which are maintained by Government funds, although the student must pay a small annual registration fee, and in such private secondary schools as are established in accordance with the General Regulations and are under the supervision of the Council or the Ministry of Public Instruction. In 1918 there were 14 secondary schools with an enrollment of 1,540 pupils.

Data taken from:

Reglamento de Segunda Enseñanza, Quito, 1914.

Reglamento General de Segunda Enseñanza, Quito, 1917.

Informe del Ministro de Instrucción Pública, Bellas Artes, etc., Quito, 1918.

## GUATEMALA.

Primary education comprises 6 years and constitutes the preparation required for admission to the secondary school courses offered in the *Institutos Nacionales* (National Institutes). Secondary education covers a period of five years, with the following curriculum:

*First year.*—Spanish grammar, English, arithmetic, cosmography and physical geography, geography and history of Central America, mechanical drawing.

*Second year.*—Spanish grammar, English, algebra, zoology, descriptive geography, physiology and hygiene.

*Third year.*—English, geometry and trigonometry, botany and mineralogy, ancient and medieval history, French, military science and tactics.<sup>1</sup>

*Fourth year.*—English, French, philosophy, physics and mechanics, modern history, book-keeping, stenography.

*Fifth year.*—English, French, philosophy, chemistry, general grammar and rhetoric, civics and political economy.

<sup>1</sup>For boys only.

All recitations are held daily, each lasting 50 minutes; six hours are the maximum daily program for each pupil; the school year is 36 weeks. On completing the secondary school course and after taking a special examination the student receives the diploma of *Bachiller en Ciencias y Letras* (Bachelor of Science and Letters), which enables him to enter the University.

There are 7 National Institutes with an enrollment of about 2,200 pupils. There are normal and commercial sections connected with the Institutes. Secondary education is free. (Decree of February 25, 1915.)

Data taken from:

Revista de Instrucción Pública, Numbers 9 and 10, Secretaría del Ramo, Guatemala, July and August, 1914.

Programas detallados para los Institutos de Segunda Enseñanza y Escuelas Normales, Secretaría de Instrucción Pública, Guatemala, 1915.

Centro América, Guatemala. Organo de la Oficina Internacional Centro Americana. April, May and July, 1917.

#### HAITI.

Public education, primary and secondary, is free. The latter is imparted in 12 national secondary boys' schools, with an enrollment of 1,162 pupils, and in 5 national secondary girls' schools, with an enrollment of 324 pupils.

To be admitted to the secondary school, the student, besides having his certificate of the primary elementary school showing that he has completed the first four grades, must pass an entrance examination and be 13 years of age. For the purpose of facilitating the entrance of pupils into the *Lycées* (secondary schools), the principals are authorized to organize preparatory courses.

According to the Executive Order of September 20, 1918, the work in the *Lycées* and *Collèges* (secondary schools) is divided into two cycles. The first cycle comprises three years and the second two years. For reasons of economy only the secondary schools located in the capital, Port-au-Prince, offer the two cycles.

The first cycle includes the following subjects: religious instruction; moral and civic instruction; French language and literature; a modern language (English or Spanish); history of Haiti and principal divisions of general history; geography of Haiti and general geography; applied arithmetic; elementary algebra, elementary geometry, elementary trigonometry; elementary accounting and book-keeping; elementary cosmography; elementary physical and natural sciences; elementary agriculture; drawing; penmanship; elementary hygiene; physical training.

All the above mentioned subjects are required for all pupils, who on completing them take an examination in order to obtain the first certificate of secondary school work, necessary for admission to the second cycle or to the *École Industrielle* (Industrial School).

The second cycle, designed as preparatory to professional studies, has two sections or courses: (a) Pure Letters; and (b) Letters and Science. The following subjects are common to both courses: French language and literature; a modern language (English or Spanish); history and geography; natural sciences; philosophy; hygiene and physical training.

The students of the Pure Letters course must take the following subjects: Latin language and literature; Greek language and literature; mathematics; natural and physical sciences. Those of the Letters and Science course take the following: theoretical arithmetic; elementary and advanced algebra; elementary and advanced geometry; trigonometry; descriptive geometry; cosmography; mechanics; physics; chemistry; natural sciences; drawing.

Upon finishing the work of the second cycle the student must take an examination in order to receive the second certificate of secondary school work, which is the *Baccalauréat ès lettres* or *Baccalauréat ès Sciences et ès lettres*, required for pursuing studies in the University.

The school year is 36 weeks of five days each; the recitation period lasts 1 hour and 20 minutes.

Data taken from:

Le Moniteur (official gazette), Port-au-Prince, September 28, 1918; September 25, 1918; March 8, 1919; March 12, 1919; August 30, 1919.

Annuaire de Législation Haitienne, 1917.

#### HONDURAS.

As a result of Legislative Decree No. 24, April 2, 1914, which changed some of the articles of the Law of Public Instruction, a new set of regulations for secondary education was issued January, 1915. These regulations prescribe that in order to be admitted to a secondary school one must have completed the five grades of the elementary school, be 12 years of age and pay an annual registration fee of 10 pesos (1 peso = \$0.40 gold). The following uniform course of study is established:

Subjects.	Periods a week by years.				
	I.	II.	III.	IV.	V.
<i>Intellectual and Moral Education:</i>					
1. Spanish	6	5	5	5	5
2. French	3	3	3	2	1
3. English	3	3	3	2	1
4. Mathematics	6	6	6	6	4
5. Accounting				2	3
6. Natural sciences	3	3	4		
7. Physics				3	4
8. Chemistry				3	4
9. Physiology and hygiene	2	3	3		
10. Geography and history	5	4	4	4	4
11. Psychology, logic and ethics				3	4
12. Cosmography					3
13. Moral and civic instruction	1	2	1	2	2
<i>Artistic and Physical Education:</i>					
14. Penmanship	2	2	2	2	
15. Manual training	2	2	2	1	
16. Physical training	1	1	1	1	1
	34	34	34	36	36

50 minutes is the length of the recitation period and 36 weeks that of the school year. On finishing the work above specified and after taking the required examinations the student is granted the diploma of *Bachiller en Ciencias y Letras* (Bachelor of Science and Letters), which entitles him to continue his professional studies.

There are 5 national secondary schools and one that is subsidized by the Government. The enrollment in 1918 was 250 students. There are Normal and Commercial sections connected with the secondary schools.

Data taken from:

Reglamento de Segunda Enseñanza, Tipografía Nacional, Tegucigalpa, 1916.

Memoria de Instrucción Pública, Tegucigalpa, 1917-1918.

### MEXICO.

The following course of study was put into effect the 1st of May, 1917, in the *Escuelas Preparatorias* or secondary schools of the Federal District:

Subjects.	Periods a week by years.			
	I.	II.	III.	IV.
Spanish language and language exercises.....	3	3	3	.....
Reading and elocution.....			3	.....
Spanish literature, analysis of classic models and composition.....				5
French.....	3			
English.....		3	3	3
Arithmetic and algebra.....	5			
Plane and solid geometry and trigonometry.....		5		
General geography.....	3			
Geography of Mexico.....		3		
Elementary cosmography.....		2		
Elementary natural history (botany, zoology, physiology, anatomy and hygiene).....			5	
Experimental physics.....			3	
General chemistry.....				5
National history.....		3		
General history.....			3	
Greek and Latin roots.....	2			
Practical and elementary ethics.....	3			
Civics and elementary law.....			2	2
Drawing and manual training.....	2	2		
Logic and psychology.....				5
	21	21	22	20

Physical and military training is given 5 hours a week throughout the course.

Secondary education is preceded by 6 years in the primary school. Pupils who finish the four-year secondary school course have the right to matriculate in the schools of Medicine, Engineering, Law and Dentistry. The school year is about 182 days.

In January, 1920, the National Council of Education approved the following curriculum to go into effect in March, the beginning of the school year:

*First year.*—National language, oral and written composition; modern languages (English, French or German),<sup>1</sup> arithmetic; elements of biological sciences; civics and vocational guidance; elements of physiography and general geography; drawing and manual training (for boys), domestic sciences for girls; physical training; military drill.

*Second year.*—Required subjects (23 periods): Spanish grammar, oral and written composition; modern language; algebra and plane geometry; geography of Mexico and geography of America; drawing; music (chorus singing); physical training; military drill.

Elective subjects (5 periods): Biology II (botany and zoology, 3 recitation periods and 2 periods of laboratory work); commercial arithmetic; manual training; book keeping.

*Third year.*—Required subjects (22 periods): Spanish grammar, oral and written composition; solid geometry; anatomy, physiology and hygiene; general history; physics (3 recitation periods and 2 of laboratory work); music (chorus singing); physical training.

Elective subjects (6 periods):

For professions: Latin and Greek roots; trigonometry; English or French; economics.

For other callings: Commercial English; commercial geography, commercial practice and commercial correspondence; practical and ornamental drawing.

*Fourth year.*—Required subjects (17 periods): Spanish literature; national history; elementary law; chemistry (3 recitation periods and 2 laboratory periods); music (chorus singing); physical training; military drill.

Elective subjects (9 periods).

For professions: Latin I; mineralogy and geology; cosmography; French or English; psychology; modern history and European history; algebra; descriptive geometry.

For other callings: Commercial law; shorthand and typewriting; banking and finance; applied drawing (posters and advertisements).

*Fifth year.*—Subjects required for students who are to continue their work in the National University (10 periods): General literature; logic; elementary ethics; physical training.

Elective subjects (12 periods):

Law: Sociology; history of America; ancient history; Spanish literature II; Latin II; general geography II.

Engineering: Analytical geometry and calculus; advanced physics; astronomy; drawing; general chemistry; Spanish literature II.

Medicine: Advanced chemistry; botany; zoology and advanced natural history; Latin II; anatomy and physiology, advanced course; Spanish literature II.

YUCATAN.—Secondary education was reorganized in April, 1917. It consists of a five-year curriculum, comprising 3 years of general studies and 2 years of specialized studies preparatory to the professions of medicine and pharmacy, law and engineering.

Data taken from:

Diario Oficial, Ciudad de Mexico, Number 91, April 19, 1917.

El Universal, Ciudad de Mexico, January 6, 1920.

Instituto Literario de Yucatán (Escuela Preparatoria del Estado), 1917. Decree No. 682, April 24, 1917.

<sup>1</sup>The student may select any of these three modern languages in the first and second years, and in the third and fourth years he has the opportunity of taking a second language.

## NICARAGUA.

Primary education comprises six years and secondary education five. These two branches are prerequisite for obtaining the diploma of *Bachiller en Ciencias y Letras* (Bachelor of Science and Letters) and for admission to the University. The *Institutos Nacionales* (National Secondary Institutes) are under private administration, but the Government exercises direct supervision over the appointment of teachers, curriculum, examinations, etc., although only in the *Instituto Nacional Central* at Managua is the teaching force directly appointed by the Department of Public Instruction. The Government, besides furnishing the buildings, furniture and scientific equipment, grants a monthly subsidy for the maintenance of each institute. There are 8 national secondary schools, including the Normal School for Girls, which grant the diploma of Bachelor of Science and Letters. The pupils pay an annual registration fee varying between \$30 and \$50.

By decree of May 1, 1916, the course of study adopted October 2, 1911, was annulled and the following was prescribed:

Subjects.	Periods a week by years.				
	I.	II.	III.	IV.	V.
Spanish, with study of Latin and Greek roots; composition . . . . .	6	6	.....	.....	.....
Literature: rhetoric and poetry, history of Spanish literature and elementary grammar, composition . . . . .	.....	.....	6	.....	.....
French . . . . .	3	3	3	.....	.....
English . . . . .	.....	.....	3	3	3
Geography: America, Europe and Asia . . . . .	3	.....	.....	.....	.....
Central America, and especially Nicaragua; Africa and Oceania . . . . .	.....	3	.....	.....	.....
Cosmography and physical geography . . . . .	.....	.....	3	.....	.....
History: prehistoric and ancient times, middle ages . . . . .	3	.....	.....	.....	.....
America, modern and contemporaneous times . . . . .	.....	3	.....	.....	.....
Central America and especially Nicaragua . . . . .	.....	.....	3	.....	.....
Mathematics: arithmetic . . . . .	6	.....	.....	.....	.....
Elementary algebra . . . . .	.....	3	.....	.....	.....
Plane and solid geometry . . . . .	.....	.....	6	.....	.....
Trigonometry and topography . . . . .	.....	.....	.....	3	.....
Physics: properties of matter, mechanics, sound and heat . . . . .	.....	.....	.....	6	.....
Light, electricity, meteorology . . . . .	.....	.....	.....	.....	6
Chemistry: inorganic . . . . .	.....	.....	.....	3	.....
Organic . . . . .	.....	.....	.....	.....	6
Natural history: mineralogy and geology . . . . .	.....	.....	.....	3	.....
Zoology and botany . . . . .	.....	.....	.....	.....	6
Physiology and hygiene . . . . .	.....	.....	.....	.....	3
Philosophy: psychology and logic . . . . .	.....	.....	.....	3	.....
Ethics and theodicy; history of philosophy . . . . .	.....	.....	.....	.....	3
Freehand and mechanical drawing . . . . .	3	3	.....	.....	.....
	24	21	24	21	27

In teaching science theoretical instruction shall be illustrated by practical demonstration whenever possible.

The recitation period is one hour in length; the school week six days and the school year 182 days.

Data taken from:

Memoria del Ministerio de Instrucción Pública, Managua, 1914.

Plan de Estudios para el Bachillerato en Ciencias y Letras.

Ministerio de Instrucción Pública, Managua, 1916.

The Bulletin of the Pan American Union, October, 1918.

## PANAMA.

Secondary education is given in the *Liceo* (secondary school) which is one of the important divisions of the *Instituto Nacional de Panamá* (National Institute of Panama). The *Liceo* course of five years is divided into cycles, of 3 and 2 years, respectively. At the end of the first three years, a certificate covering the first cycle is given, and on terminating the second cycle and passing the required examinations, the diploma of *Bachiller en Humanidades* (Bachelor of Humanities) is granted.

To enter the first year of the *Liceo* it is necessary to have passed the six grades of the elementary school and be at least 13 years of age.

The following course of study was authorized by decree No. 86, June 15, 1918:

Subjects.	Periods a week by years.				
	I.	II.	III.	IV.	V.
Spanish.....	6	6	6	5	
Mathematics.....	6	6	6	5	
Natural sciences.....	3	3	3		
Physics.....			3	4	
Chemistry.....				3	3
Geography.....	4	4	2		
History.....		2	2	2	4
English.....	3	3	3	3	3
French.....				3	6
Accounting and typewriting.....			3	3	
Biology and hygiene.....					2
Civics.....			2	2	2
Philosophy.....				3	4
Drawing.....	2	2			
Manual training.....	2	2			
Singing.....					
Gymnastics.....	2	2	2	2	
	28	30	34	35	32

The school year is 36 weeks. Instruction in the *Liceo* is free.

Data taken from:

Memoria de Instrucción Pública, Panamá, 1918.

Reglamento y Programas del Instituto Nacional, Panamá, 1916.

## PARAGUAY.

A primary school preparation, covering six years, is the requirement for admission to secondary education. The latter is provided in the *Colegios Nacionales* (National Secondary Schools). These are supported by the Government, although the students pay for annual registration, for examinations given under certain conditions to privately prepared students, and for diplomas. During 1918 a total of 756 students were registered in the secondary schools. There are private secondary schools, which follow the curriculum and methods of the Government schools and are under its supervision.

I.—The course of study given below was adopted March 25, 1904, and was in force up to and including the school year of 1919.



Subjects.	Periods a week by years.					
	I.	II.	III.	IV.	V.	VI.
Spanish .....	5	3	4	3	3	3
French .....	5	5	5			
German or Latin .....				5	5	5
Mathematics:						
Arithmetic .....	3	5				
Algebra .....			3			
Geometry .....			2			
Solid geometry .....				2		
Trigonometry, topography and cosmography .....				4		
History:						
American and Paraguayan .....	3	3				
Oriental and Greek .....			3			
Roman .....				2		
Medieval and modern .....					4	
Contemporaneous .....						3
Geography .....	3	2	2			
Natural sciences:						
Botany and geology .....				4		
Zoology .....						2
Anatomy, physiology and hygiene .....					3	
Physics .....					4	4
Chemistry .....					3	3
Philosophy:						
Psychology and logic .....					4	
Ethics and general philosophy .....						3
Practical ethics .....		2				
Civics and political economy .....						2
Elementary law .....				3		
Accounting .....			3			
Drawing and penmanship .....	3	3				
Drawing .....			2	2		
	22	23	24	25	26	25

Physical training is prescribed each year, with the addition of fencing the last year.

All the subjects mentioned above, including drawing and physical training, are required for the diploma of *bachiller* (Bachelor), except Latin, which is obligatory for those students who are to enter the Law School, and German for those who are to enter the Medical School.

Students may enter the Pharmaceutical, Dental, Notarial and Surveying Schools on the certificate of secondary studies granted at the end of the 4th year provided they have substituted for the usual required courses in German, Latin, Roman history, botany and geology the following courses: Roman, medieval and contemporaneous history (5 periods), natural history (3), physics and chemistry (5 periods). In the same way the certificate of Commercial Assistant is given to students who do additional work in commercial arithmetic and English (3 periods) in the third year, and substitute for the usual work in the fourth year, accounting (3 periods), English (6), commercial law (2), and office practice (3). These subjects are treated in an elementary way.

II.—By decree No. 10560, September 22, 1919, the above course of study was changed as follows: The secondary school course is divided into two cycles; the first cycle is of four years, elementary and general in character, the second cycle is of two years, preparatory and specialized.

The following table shows the subjects comprehended in the first cycle, and their arrangement by years:

Subjects.	Periods a week by years.			
	I.	II.	III.	IV.
Spanish: Grammar.....	5	5		
Literature (preceptive and exercises).....			3	
General literature and exercises.....				3
Reading and elocution.....	2			
Reading and composition.....		2		
History:				
National and American.....	3	3		
Ancient and medieval.....			4	
Modern and contemporaneous.....				4
Practical ethics (reading and discussions).....	2			
Civics.....	5	5	3	
French.....			3	
Economics and elementary law.....				4
Philosophy (psychology and logic).....	4			
Mathematics: practical arithmetic.....		4		
Analytical arithmetic.....			4	
Algebra.....			3	
Plane and solid geometry.....				3
Trigonometry and topography.....	3			
Geography: general notions (Paraguay and America).....		2		
Europe.....			2	
Asia, Africa and Oceania.....				2
Natural Sciences:				
Mineralogy and geology.....	2			
Botany.....		3		
Zoology.....			2	
Anatomy, physiology and hygiene.....				3
Physics.....			2	3
Chemistry: inorganic.....			2	
Organic.....				3
Drawing and penmanship.....	2	2		
Drawing.....			2	2
Accounting.....				3
Physical training.....	2	2	2	2
	32	32	32	30

Shorthand is optional every year.

Those who pass the studies of the first cycle will receive a diploma of secondary studies, which enables them:

(a) To enter upon the second cycle, if they have taken previously a complementary course in Latin, English or German (5 periods each) chosen according to the work they are to pursue in this cycle.

(b) To obtain the certificate of normal teacher, if they take a course in pedagogy (6 periods) with a year of satisfactory class room practice in the normal schools.

(c) To secure the certificate of bookkeeper, public accountant, public translator, or public attorney, if they take the corresponding courses.

(d) To enter the lesser schools such as the Notarial, Pharmaceutical, Obstetrical, Dental, Agricultural and Veterinary Schools.

The second cycle comprises the following groups:

(A) *Humanities*, preparatory for the school of Law and Social Sciences, or that of Philosophy and Letters.

(B) *Natural sciences*, preparatory for the Medical School or the doctorate in Natural Sciences.

(C) *Mathematics*, preparatory for the Engineering School or the doctorate in Exact Sciences.

## GROUP A—HUMANITIES.

Subjects.	First year.	Second year.
Spanish and Latin American literature.....	3	3
Elocution and composition.....	1	1
Composition and literary criticism.....	3	1
Elements of anthropology.....	4	4
Ancient and medieval history.....	3	4
Modern and contemporaneous history.....	3	4
National history.....	3	4
History of foreign literature.....	3	4
Elements of sociology.....	4	3
Philosophy.....	4	4
Latin.....	5	3
English.....	5	3
Greek roots.....	5	3
Physical training.....	2	2
	30	30

## GROUP B—NATURAL SCIENCES.

Physics.....	3	4
Chemistry.....	3	4
Mineralogy and geology.....	3	3
Botany.....	3	3
Zoology.....	3	3
Anatomy, physiology and hygiene.....	3	3
German.....	5	3
Latin.....	5	3
Greek roots.....	5	3
Drawing.....	2	2
Physical training.....	2	2
	30	30

## GROUP C—MATHEMATICS.

Advanced algebra.....	4	3
Plane geometry.....	3	3
Solid geometry.....	2	3
Trigonometry (rectilinear).....	2	3
Trigonometry (spherical).....	3	3
Topography and cosmography.....	3	4
Geodesy.....	3	4
Physics.....	3	4
Chemistry.....	3	4
Mineralogy and geology.....	3	4
English.....	5	3
Mechanical drawing.....	2	3
Topographical drawing and map-making.....	2	3
Physical training.....	2	2
	30	30

The class period is 45 minutes and the school year 36 weeks.

The students who finish successfully the work of the second cycle, group A, receive the diploma of *Bachiller en Letras* or *Humanidades* (Bachelor of Letters or Humanities), and if they take groups B or C they receive the diploma of *Bachiller en Ciencias Naturales* (Bachelor of Natural Sciences), or *Matemáticas* (Mathematics), as the case may be. The Bachelor in Mathematics by taking a course in surveying may receive the diploma of public surveyor.

The first cycle is to be established in the school year of 1920, and the second cycle in 1921.

To obtain the diplomas mentioned in the plan the student must pass all the subjects, including physical training, and have a mark not lower than *good*; otherwise he receives only a certificate of his work without the legal rights conferred by the diplomas.

Data taken from:

Enseñanza secundaria.—Plan de Estudios (pamphlet), Asunción, 1904.

Diario Oficial, No. 489, Asunción, September 22 and 24, 1919.

El Instituto Paraguayo y su representación en el Congreso Panamericano de Washington, Asunción, 1917.

### PERU.

Secondary education is known officially as *Instrucción Media* (Intermediate Instruction) and is given in 28 *Colegios Nacionales* (National Secondary Schools), 25 for boys and 3 for girls, and in private secondary schools that comply with official regulations.

To be admitted to the secondary schools the pupil must prove by certificates that he has completed the five grades of the primary school and that he is at least 12 years old.

The present course of study was adopted January 29, 1910, and the only change since made is the addition of a course in the history of Peru in the first and second years.

Subjects.	Periods a week by years.			
	I. 12-13 years.	II. 13-14 years.	III. 14-15 years.	IV. 15-16 years.
Spanish.....	4	4	3	.....
Literature.....				3
Modern languages (English, French or German).....	3	3	3	2
General history.....	3	3	2	2
History of Peru.....	(*)	1	1	2
Geography: General, and Asia.....	2			.....
Europe and Africa.....		2		.....
America and Oceania.....			2	.....
Peru.....				2
Mathematics:				
Arithmetic.....	5	1		.....
Algebra.....		2	2	.....
Geometry.....		2	2	.....
Trigonometry and surveying.....				1
Natural Sciences:				
Zoology.....	3			.....
Botany.....		3		.....
Mineralogy and geology.....			2	.....
Anatomy and physiology.....				1
Physics.....			3	3
Chemistry (1 hour laboratory work in third year).....			3	2
Philosophy.....				5
Study of the Constitution.....				1
Principles and dogmas of the Catholic Religion.....	1	1		.....
Penmanship.....	1	1		.....
Drawing.....	2	2	2	2
Music.....	1	1	1	.....
Physical and military training.....	3	3	3	2
	28	29	29	28

\*During the second semester an hour a week is devoted to teaching history of Peru.

The length of the recitation period is one hour, and of the school year, 36 weeks.

At the completion of the general secondary school course students enter the Faculty of Philosophy and Letters, where at the end of two years they receive the Bachelor's degree and at the end of three years

work the Doctor's degree. The two years' course in the Faculty of Philosophy and Letters is required for admission to the Schools of Law, Medicine and Political Science. It includes the following studies: Ancient literature; Spanish literature; history of modern civilization; critical history of Peru; sociology; metaphysics (two courses); general philosophy; education; ethics.

Secondary education is supported by government and departmental subsidies, which in 1918 amounted to 28,433 and 5,771 Peruvian pounds (1 pound = \$4.86), respectively. The pupils pay annual registration and tuition fees. The enrollment in the national secondary schools was 3,000 and in the private secondary schools, 2,200.

Data taken from:

Ley Orgánica de Instrucción. Librería francesa científica, Lima, 1916.

Plan de Educación y Disposiciones relativas al mismo, Ministerio de Instrucción Pública, Lima, 1916, 1917 and 1918.

Reglamento de Instrucción Media. Ministerio de Instrucción Pública, Lima, 1912.

Anales de la Universidad Mayor de San Marcos, Tomo 30.

Educación Nacional, Boletín 1 and 2, Lima.

La Universidad del Cuzco, por Luis Valcárcel (1913).

Plan de Estudios y Programas para los Colegios de Segunda Enseñanza, Ministerio de Instrucción Pública, Lima, 1917.

Memoria de Instrucción Pública, Lima, 1917.

Presupuestos de los Colegios Nacionales, Lima, Año de 1918-1919.

#### SALVADOR.

Under the provisions of the enactments published on December 7, 1911, December 17, 1917, and February 8, 1918, secondary education comprises: a Complementary Course of one year, a General Course of Science and Letters of four years, and a Professional Preparatory Course of one year. These studies, except those of the sixth year, which are given at the University, can be carried on in the *Instituto Nacional* (National Institute) at San Salvador, entirely supported by the State, and in secondary schools established in different towns with official authorization. Some of these institutions are maintained by the municipalities and others receive financial help from the Government, but as a rule they do not offer the complete five-year course. In 1917 the number of secondary schools was 17, with an enrollment of about 2,200 pupils, including those of the *Colegio Técnico-Práctico de Señoritas* (Technical-Practical School for Girls) which, although differently organized, is considered as a secondary school.

To enter upon the secondary school course the pupil must take an examination in writing, Spanish grammar, arithmetic, history and geography of Central America; present a certificate of primary education (a minimum of five years), be 11 years old and pay the examination fee. An annual registration fee is also required, 2 *colones* in the Complementary Course and 4 *colones* in the General Course (1 *colón* = \$0.60).

Secondary instruction is given in accordance with the following curriculum:<sup>1</sup>

Subjects.	Periods a week by years.				
	Complementary course.	General Course of Science and Letters.			
		I.	II.	III.	IV.
Spanish.....	5	3	3	3	3
Latin.....		1	1	1	1
Greek roots.....			1		
Dictation.....	2	1	1	1	
Moral and civic instruction.....	1				
Civic instruction.....		1		1	
Geography and history.....	5(6)	6	6	4	2
Arithmetic.....	6	6			
Algebra.....			3	3	
Geometry.....			3	3	2(3)
Trigonometry.....				3	
French.....	3	3	3	2	2
English.....	3	3	3	2	2
Zoology.....		2			
Botany.....			2		
Geology and hygiene.....				1(2)	
Physics.....				3	3
Mechanics.....					3
Chemistry.....				3	3
Cosmography.....					3
Ethics and psychology.....			2		
Logic.....				2	
Drawing.....	3	3	3	2	2
	28(29)	29	31	31(32)	29(30)

The school year is 38 weeks. Pupils who have successfully completed the above course of study and taken the proper examination obtain the diploma of *Bachiller en Ciencias y Letras* (Bachelor of Science and Letters), which qualifies for admission to the Professional Preparatory Course.

II. The Professional Preparatory Course is designed to prepare the student to continue his work at the University. It covers one year's work and is under the control of the University. The curriculum is as follows:

PREPARATORY FOR LAW AND SOCIAL SCIENCES.

Subjects.	Periods a week.
Prologomena of law.....	6
Logic applied to law.....	3
History of Salvadorian juridic institutions.....	3
Elementary Spanish law.....	3
History of contemporary civilization.....	3
Professional ethics.....	2
Spanish composition.....	4
French (translation of legal works).....	3
English (translation of legal works).....	3

PREPARATORY FOR MEDICINE AND PHARMACY.

Elements of anatomy and physiology.....	6
Biological physics.....	4
Natural history.....	5
Microscopy.....	3
Inorganic and organic chemistry.....	3
Spanish composition.....	5
French (translation).....	3
English (translation).....	2
	2

<sup>1</sup>On January 15, 1920, new regulations for secondary education were issued by the Department of Public Instruction. The Complementary Course was suppressed, leaving five years of strictly secondary education. There are also changes in the number of periods per week assigned to the different subjects of the curriculum.

Data taken from:

Diario Oficial, San Salvador, December 7, 1911; December 18, 1917; February 8, 1918.

Memoria de Instrucción Pública, San Salvador, 1917.

Libro Rosado de El Salvador, San Salvador, April, 1918.

#### URUGUAY.

I. Secondary education is given in the State *Liceos* (secondary schools), in semi-official institutions and in private schools that conform to official regulations. There are 22 departmental *Liceos*, 2 in the capital, and 2 others called "Sections of Secondary Education," one for boys and one for girls, connected with the University of Montevideo. The regular students, *i. e.*, those taking the regular courses of the *Liceos*, pay neither matriculation nor examination fees; the students of the other secondary schools are obliged to pay these fees, but may be exempted by the Executive Power.

To enter the *Liceos* one must have completed the fifth year of the urban schools or pass an entrance examination; however it appears to be necessary to finish the sixth or seventh grade in order to follow courses in the *Liceos* of the capital, or to pass an entrance examination.

Secondary education comprehends four years of study, at the end of which the pupil, if he is passed, receives the certificate of *suficiencia liceal* (secondary studies), which entitles him to enter the schools of Commerce, Agriculture, Veterinary Science, Notarial Studies, and the professional preparatory branch of secondary education.

On October 20, 1911, the following curriculum was adopted as an experiment:

*First year.*—Spanish, mathematics, French, natural history, drawing, national history and history of America, geography, physical training.

*Second year.*—Spanish, mathematics, English or German, drawing, natural history, geography, physics and chemistry, physical training.

*Third year.*—Spanish, French, English or German, drawing, general history, natural history, shorthand, physical training.

*Fourth year.*—Literature, French, English or German, drawing, general history, philosophy, cosmography, civics, shorthand, physical training.

The above plan was on trial until February 15, 1918, when the following was substituted for it:

*First year.*—Spanish, French, national history and history of America, natural history, geography, mathematics, drawing, hygiene and physical training.

*Second year.*—Spanish, French, English or German, mathematics, physical geography, natural history, history of America and national history, hygiene and physical training.

*Third year.*—Spanish (literature and composition), French, English or German, mathematics, physics, physical geography, universal history, chemistry, commerce, hygiene and physical training.

*Fourth year.*—Spanish (literature and composition, elements of foreign literature), mathematics, French, English or German, universal history, chemistry, cosmography, industries, moral and civic instruction, hygiene and physical training.

The class period is 45 minutes, with 5 days a week and 180 school days.

II. Professional preparatory instruction constitutes the second part of the Section called Secondary and Preparatory Education. It consists of two years and varies according to the career that the student intends to follow. It is imparted in the "Sections" connected with the Uni-

versity of Montevideo and in the *Liceos* of Salto, Paysandú, Melo and Mercedes in accordance with the following curricula:<sup>1</sup>

#### PREPARATORY FOR MEDICINE.

*First year.*—Chemistry; physics; natural history; French; English or German; philosophy; physical training.

*Second year.*—Chemistry; physics; natural history; philosophy; literature; physical training.

#### PREPARATORY FOR LAW.

*First year.*—Universal history; philosophy; literature; comprehensive courses (theoretical-practical) in physical-natural sciences; French; English; German or Italian; physical training.

*Second year.*—Universal history; philosophy; literature; comprehensive courses (theoretical-practical) in physical-natural sciences; history of America and national history; physical training.

#### PREPARATORY FOR ENGINEERING.

*First year.*—Review and amplification of mathematics; drawing; physics; chemistry; philosophy; French; English or German; physical exercises.

*Second year.*—Elements of advanced algebra and analytical geometry; elements of projective and descriptive geometry; elementary mechanics; modelling; drawing.

#### PREPARATORY FOR ARCHITECTURE.

*First year.*—Review and amplification of mathematics; drawing; French; English or German; physical exercises.

*Second year.*—Elements of advanced algebra and analytical geometry; elements of projective and descriptive geometry; elementary mechanics; modelling; drawing.

#### PREPARATORY FOR SURVEYING.

*First year.*—Review and amplification of mathematics; topographic drawing; geography of the Republic; French; English or German; physics; physical training.

*Second year.*—Elements of advanced algebra and analytical geometry; projective and descriptive geometry; topographic drawing; mineralogy and geology; cosmography; physical training.

#### PREPARATORY FOR PHARMACY.

The preparatory studies for pharmacy cover one year and comprehend the following subjects: French; English or German; physics; chemistry; zoology and botany; physical training.

#### PREPARATORY FOR DENTISTRY.

The preparatory studies for dentistry cover one year and comprehend the following subjects: French; English or German; physics; chemistry; physical training.

The annual budget for Secondary and Preparatory education is about 400,000 *pesos* (1 *peso* = \$1,04 gold).

Data taken from:

Leyes y Reglamentos de la Universidad de la República, Montevideo.

Memoria de Instrucción Pública de 1916 a 1918, Montevideo.

Diario Oficial, Montevideo, February 13, 1918.

Ley de Presupuestos de 1916 a 1917, Montevideo.

### VENEZUELA.

According to Decree No. 31 of June, 1915, Secondary Education is divided into two courses: one of general studies, four years in length, and another of specialized work, for two years. The latter comprehends three different sections: Philosophy and Letters, Physical and

<sup>1</sup>Italian is an elective instead of English or German. By decree of August 31, 1917, the teaching of Portuguese was included in the curriculum for such students as elect to matriculate in those classes; he course covers two years.



Mathematical Sciences, and Physical and Natural Sciences. In the *Liceos* (secondary schools) are given the two complete courses: the general, and the specialized with its three sections. In the *Colegios* (secondary schools) is given only the general course, although in some of them one or more sections of the specialized course are offered.

I. In order to enter the first year of the general course the pupil must possess the official certificate of the upper primary school: to obtain this certificate it is necessary to have done the work of the six primary school grades or pass an entrance examination in the proper subjects.

The curriculum prescribed for the *Liceo de Caracas* (1917) serves as a model for the other *Liceos* and *Colegios*.

Subjects.	Periods a week by years.			
	I.	II.	III.	IV.
Spanish	3	3		
Spanish literature and composition			3	
French	3	3		
English			3	3
Elementary Latin and Greek			3	3
Analytical arithmetic	6			
Elementary algebra		6		
Elementary geometry			6	
Elementary trigonometry				2
Geography and history of Venezuela	6			
Geography and history of America		6		
Universal geography and history			3	3
Elementary botany	3			
Elementary zoology		3		
Elementary mineralogy and geology			3	
Elementary physics			6	
Elementary chemistry				3
Elementary cosmography and chronology				3
Elementary philosophy			3	3
Freehand drawing	2			
Mechanical drawing		3		
Freehand and mechanical drawing			2	
Elementary topography and topographic drawing				2
	23	24	32	22

In the *Liceo de Niñas* (Girls' Secondary School) at Caracas the following subjects are taught: 1, Spanish grammar, composition and elements of Spanish literature; 2, French and elements of French literature; 3, English and elements of English literature; 4, arithmetic, and elements of geometry and algebra (applied to every day life); 5, elements of natural history, chemistry, cosmography, meteorology; 6, household management and bookkeeping; 7, household hygiene and care of the child; 8, elements of universal history and geography and of Venezuela; 9, drawing; 10, music; 11, sewing, embroidery, etc; gymnastics.

II. For admission to the specialized course it is necessary to have been promoted in all the subjects of the general course, or to take an examination.

The studies of the specialized course are:

#### SECTION OF PHILOSOPHY AND LETTERS.

*First year.*—Latin, Greek, general literature and history of literature, philosophy, German, freehand drawing.

*Second year.*—Latin, general literature and history of literature, history of philosophy, German, freehand drawing.

## SECTION OF NATURAL AND PHYSICAL SCIENCES.

*First year.*—Physics, chemistry, botany, zoology, elements of astronomy, German, freehand drawing.

*Second year.*—Physics, chemistry, mineralogy and geology, general biology, German, freehand drawing.

## SECTION OF PHYSICAL SCIENCES AND MATHEMATICS.

*First year.*—Physics, chemistry, algebra, plane and solid geometry, German, mechanical drawing.

*Second year.*—Physics, chemistry, rectilinear and spherical trigonometry, elements of topography, elements of astronomy, German, topographic drawing.

At the completion of the specialized course and after passing an examination, the student receives the diploma of *bachiller* (Bachelor) which enables him to matriculate in the University.

In botany, zoology, physics, chemistry, mineralogy and geology, six months' laboratory work are prescribed as complementary to the theoretical instruction. Physical training is required.

The school year is about 190 days and the recitation period is one hour. There are 17 national secondary schools with an annual budget of 300,000 *bolivares* (1 *bolivar* = \$0,20 gold).

Data taken from:

Memoria de Instrucción Pública, Caracas, 1916.

Memoria de Instrucción Pública, Caracas, 1918.







