

Curricula for the Degree of Bachelor of Science

For those students whose interest is in the applied sciences and who wish to enter seriously upon the pursuit of the specialized knowledge and techniques of the sciences, the University offers several curricula leading to the degree of Bachelor of Science. Each of these provides for specialization in a particular science (or in the work of the Medical School or the Dental School), accompanied by the necessary instruction in related fields of science and a minimal requirement of work in English, foreign language, and other non-scientific fields. These curricula, which are designed to furnish the fundamental instruction for some of the technical professions, are eleven in number.

- Bachelor of Science in Bacteriology
- Bachelor of Science in Chemistry
- Bachelor of Science in Dentistry
- Bachelor of Science in Geology
- Bachelor of Science in Industrial Relations
- Bachelor of Science in Mathematics
- Bachelor of Science in Medical Technology
- Bachelor of Science in Medicine
- Bachelor of Science in Physics
- Bachelor of Science in Public Health
- Bachelor of Science in Public Health Nursing

Requirements for the degrees of Bachelor of Science in Bacteriology, Chemistry, Geology, Mathematics, and Physics are given in the headnotes to the Description of Courses of the departments concerned; and for the degrees in Industrial Relations, Dentistry, Medicine, Medical Technology, Public Health, and Public Health Nursing, immediately below.

Bachelor of Science in Industrial Relations

After two years in the General College, the student electing the curriculum in industrial relations in the College of Arts and Sciences takes a "core" of eight courses in business administration, economics, psychology, history, and sociology, a major of five courses in education, history, political science, psychology, or sociology, and six elective courses. (In addition to this curriculum detailed below, another program with special emphasis upon economics and business administration is offered by the School of Business Administration.)

FIRST AND SECOND YEARS

English 1, 2, 21
 Mathematics 7-8 or 7-10
 Psychology 25, one other biological science, and one physical science
 Modern foreign language 3, 4, 21; or 1-2, 3-4 (provided the language is not the same as that presented for entrance)

Social science: Social Science 1-2; Economics 31-32; Political Science 41; Sociology 51

One sophomore elective
 Hygiene 11
 Physical Education 1, 2, 3, 4, 5, 6

THIRD AND FOURTH YEARS

Business Administration 51, 71, 155
 Economics 191, and 192 or 193
 Psychology 133
 History 168 or Economics 135

One course in statistics (economics, psychology, or sociology)
 Five courses in one of the following: education, history, political science, psychology, sociology
 Six courses of electives in natural science or the humanities (history is to be counted among the humanities, unless the five courses are taken in history)

Bachelor of Science in Medicine or Bachelor of Science in Dentistry

The University recommends that each applicant for admission to its School of Medicine or to its School of Dentistry prepare himself as fully as his age and resources permit. If possible, he should secure a bachelor's degree before beginning his professional study. If this is impracticable, he may secure excellent preparation by completing the academic curriculum outlined below leading to the degree of Bachelor of Science in Medicine and Bachelor of Science in Dentistry. Each degree is conferred upon the satisfactory completion of the first year of work offered in the School of Medicine or the School of Dentistry.

NOTE: Students pursuing the academic subjects listed below are hereby notified that the completion of these courses does not necessarily mean admission to the School of Medicine or of Dentistry. From the rather long list of applicants are chosen those who are deemed the most promising material for admission to the schools. No arrangement exists for granting the degree of S.B. in Medicine or S.B. in Dentistry for work in any schools other than these. Therefore, in order to secure the S.B. in Medicine or S.B. in Dentistry, the student must complete the first year of work offered in the School of Medicine or of Dentistry, and in no other such school. To be eligible for either degree at least the last year of academic work must have been done in this institution.

FIRST YEAR

Chemistry 1-2-3 or 1-2-31
 English 1-2
 Mathematics 7-8
 Social Science 1-2

French or German 3-4
 Hygiene 11
 Physical Education 1, 2, 3
 Elective, one course in the humanities

SECOND YEAR

Chemistry 31 (if not taken in first year), 43
 *English 21, 31
 †French or German 21

Botany 41, Zoology 41, 42; or
 Botany 41, Physics 24-25
 Elective, 1 course; or 2 courses if
 Chemistry 31 was taken during first year

* English 32 or 33, or an art or music elective or Religion 28, may be substituted for English 31.
 † French or German 1-2, 3-4 will satisfy the requirement providing the language is not the same as that presented for entrance.

THIRD YEAR

Psychology 24
Chemistry 61, 62

Zoology 41, 42; or
Physics 24-25
Elective, 3 courses

Bachelor of Science in Medical Technology

The following courses constitute the program for the degree of Bachelor of Science in Medical Technology:

*English (4 courses)	20 hours
†French, German, or Spanish 3-4, 21	15 hours
Freshman social science (2 courses)	10 hours
Hygiene and physical education	6 hours
Freshman mathematics	10 hours
One elective in the humanities	5 hours
Physics 24-25	12 hours
Chemistry 1-2-31; 43, 61; 146 or 44 or 62	31 (or 34) hours
Botany 41	6 hours
Zoology 41, 42, 105	18 hours
Zoology 110 or Public Health 135 (Parasitology)	5 or 3½ hours
Bacteriology 101	8 hours
Pathology 52	4 hours
Elective (not science)	20 hours
Elective (free)	18 to 20 hours

At least 30 quarter hours of grade C or higher are required from the following: chemistry courses numbered above 31, zoology courses numbered above 42, bacteriology and pathology courses.

NOTE: After the completion of this program, a year of practical experience and training in a hospital will be necessary before the student can qualify for the examinations offered by the American Society of Medical Technology.

Bachelor of Science in Public Health

The curriculum leading to the Bachelor of Science in Public Health has as its objective the broad training of students in the biological and physical sciences which are fundamental for public health workers. The first three years are largely devoted to basic courses in chemistry, physics, mathematics, and biology. In the fourth year the work becomes more specialized and is designed for two groups.

1. *Alternative a:* Biology and Public Health. This curriculum consists largely of biological courses and their application to public health sanitation. Some specialization in sanitary chemistry, bacteriology, parasitology, and malariology is possible. For those who wish to continue on into graduate work this curriculum serves as a foundation for work leading toward a Master of Science in Public Health.

2. *Alternative b:* Physical Sciences and Public Health. This curriculum is arranged for those who wish to specialize in industrial hygiene or public health engineering. To a background of fundamental work in surveying, strength of materials, and hydraulics are added courses including those in sanitation, sanitary chemistry, and bacteriology. This program of study is basic for those who wish to prepare for public health engineering work, for a Master of Science in Sanitary Engineering, or for a Master of Science in Public Health.

* An art or music elective or Religion 28 may be substituted for the fourth course of English.

† Language 1-2, 3-4 will satisfy the requirement providing the language is not the same as that presented for entrance.

FIRST YEAR

Alternative a or b: Mathematics 7, 8, 41; Chemistry 1-2-3; English 1, 2; foreign language 3-4; Social Science 1-2; Physical Education 1, 2, 3; Hygiene 11.

SECOND YEAR

Alternative a: *English 21, 31; †foreign language 21; Physics 24-25; Zoology 41, 42; Botany 41; Mathematics 31, 42; elective in the humanities.

Alternative b: *English 21, 31; Physics 24-25; Mathematics 31, 32, 33; †foreign language 21 and Botany 1, Zoology 1; or, in place of the foreign language and the freshman courses in botany and zoology, Botany 41, Geology 41, and Zoology 41; elective in the humanities.

THIRD YEAR

Alternative a: Chemistry 31 and 43; Mathematics 51; Zoology 109; Economics 61; English 59; Geology 41; Zoology 112; †Elective.

Alternative b: Chemistry 31 and 43; Mathematics 51; Mathematics 121; Mathematics 123; Mathematics 124; Mathematics 42; Economics 61; English 59; †Elective, two courses.

FOURTH YEAR

Alternative a: P. H. 111 P. H. Administration; Zoology 106-107-108; P. H. 131 Bacteriology; P. H. 161 Sanitation; P. H. 163, 164 Sanitary Chemistry; P. H. 135 Parasitology; P. H. 133 Malariology; P. H. 134 Medical Entomology; †Elective.

Alternative b: P. H. 111 P. H. Administration; P. H. 161 Sanitation; P. H. 131 Bacteriology; P. H. 121 P. H. Statistics; P. H. 162 Sanitary Chemistry; P. H. 135 Parasitology; §Math. 125; §Math. 126; Math. 61; †Elective (Min. 6 hrs., max. 11 hrs. are to be taken in School of Public Health.)

Bachelor of Science in Public Health Nursing

Candidates for this degree must fulfill the following requirements:

1. Satisfactory completion of 90 quarter hours in an accredited college or university. The amount of credit not exceeding 90 quarter hours extended for work in other colleges will be determined by the Committee on Admissions.

(a) *Required:*

24 quarter hours in the natural sciences, selected from zoology, botany, chemistry, physics, psychology.

20 quarter hours in English.

10 quarter hours in the social sciences, selected from sociology, upper division psychology, history.

(b) *Electives:*

The departmental adviser will assist the student in the selection of the remaining courses (36 quarter hours) with reference to her individual needs.

* English 32 or 33, or an art or music elective or Religion 28, may be substituted for English 31.

† Foreign language 1-2, 3-4 will satisfy the requirement providing the language is not the same as that presented for entrance.

‡ It is suggested that some of the elective courses be taken from the following: English 44, Zoology 41 and 109, Political Science 41, 42, and 101, Chemistry 61, 62, 63, Physics 120, Mathematics 125, 126.

§ Elective courses may be substituted for the courses in structures; if this substitution is made, the courses in structures must be taken in the graduate year by candidates for the Master of Science in Sanitary Engineering.