Proceedings of the Iowa Academy of Science

Volume 39 | Annual Issue Article 73

1932

Biology Courses in Fifty American Colleges

O. T. Walter
Macalester College

BIOLOGY COURSES IN FIFTY AMERICAN COLLEGES

O. T. WALTER

This statistical study was prompted by a desire to know more definitely just what courses are being offered in the field of Biology; to gain a better understanding and appreciation of some of the varied problems which are common to the administrative heads of Biology departments; to offer a bird's eye view of curricular content to those students who are looking forward to teaching Biology or administering a department in some college devoted more exclusively to undergraduate rather than graduate study; and to obtain, with some degree of reliability, a standard of comparison for our own department.

The data is taken from the more recent catalogues of the fifty colleges and universities listed below and from questionaires which were answered by the department heads of thirty of these institutions. The enrollment of these schools varies from a minimum of 141 to a maximum of 1342 students, averaging approximately 500 students. Since most of the colleges listed offer no work during the summer months it was decided to omit all summer school students as well as all exclusively summer school courses from the tabulations thus unifying the study for the usual academic year of nine months.

Albany
Alma
Antioch
Baldwin-Wallace
Buena Vista
Carleton
Carroll
Centre
Coe
Cumberland University
Davis and Elkins
Dubuque, University of
Denison University
Elmira
Emporia
Grove City
Hamilton
Hamline
Hastings
Huron
Idaho
Illinois
Intermountain
James Millikan University
Jamestown
John C. Smith
Lafayette
Lake Forest
Lindenwood
Macalester
Maryville
Missouri Valley
Morningside
Oberlin
Occidental
Ozarks, College of
Park
Parsons
St. Olaf
St. Thomas
Swarthmore
Tulsa University
Tusculum
Wabash
Washington-Jefferson
Waynesburg
Westminster, Utah
Wilson
Wittenberg
Wooster

The courses listed below are arranged according to the frequency with which the major divisions are offered and under each

major division appear the subdivisions which are also arranged in the order of their frequency.

Evolution, Genetics, and Eugenics	41
Organic Evolution	9
Applied Genetics	2
Botany — General	39
Systematic Botany	13
Plant Morphology	10
Advanced Botany	9
Plant Physiology	7
Plant Ecology	7
Plant Histology and Cytology	5
Economic Botany	4
Plant Pathology	3
Botany Seminar	2
Agriculture	1
Morphology of the Archegoniatae	1
Botany Research	1
Dendrology	1
Forest Botany	1
Geographic Botany	1
History and Classics of Botany	1
Ornamental Plants	1
Physiology — Human	39
Physiology and Human Anatomy	5
Physiology — Advanced	4
Physiology and Hygiene	4
Human Anatomy	2
Comparative Physiology	1
Embryology (Animal)	39
Bacteriology	36
Bacteriology — Advanced	4
Comparative Anatomy	35
Anatomy of the Cat	4
General Zoology	30
Invertebrate Zoology	18
Vertebrate Zoology	8
General Biology	30
Histology (usually Vertebrate)	28
Michrotechnic and (or) laboratory methods	17
Teachers Course or Special Methods	14
Individual Course and (or) Seminar	14
Ornithology	12
Advanced Phenomenology	1
Ornithology and Entomology or Birds and Insects	1
Research in Animal Ecology or Ornithology	1
Geology	10
Geology — Advanced	1
Mineralogy	1
Palaeontology	1
Entomology	9
Hygiene	9
Hygiene and Sanitation	2
Animal Ecology or Field Zoology	7
Biological Problems or Theory	6
Development of Modern Scientific Thought or History of Biology or Zoology	6
Research in Biology	4
Microbiology	3
Parasitology	3
Anthropology	2

Nature Study	2
Practical or Economic Zoology	2
Science Survey	2
Animal Behavior	1
Biology of Human Affairs	1
Biophysics	1
Civic Biology	1
The Classics of Zoology	1
Dietetics	1
Economic Vertebrates of N. Am.	1
The Elements of Preventive Medicine	1
Museum Methods	1
Advanced Museum Methods	1
Natural History of Man	1
Nutrition	1
Public Health	1
Zoology and Social Problems	1
Total number of Courses offered	75

It might be of interest to note that of the thirty colleges offering General Biology twenty-five also offer General Zoology either under the heading of General Zoology or under the headings of Invertebrate and Vertebrate Zoology. A further analysis of the catalogue descriptions of these courses indicates that where both courses are taught the General Biology is quite largely the cultural course for which no credit is allowed to major students, and General Zoology is the pre-professional course required of major students and premedical and predental students.

That seventy-five different courses are actually listed in the catalogues emphasizes the central position of Biology not only among the Sciences as such, but also in the College curriculum. Even a casual glance at the varied titles indicates the close relationship to the Physical Sciences on the one hand, and to the Social and Mental Studies on the other.

The methods of financing the laboratory work entail varied practices. In the majority of colleges all of the Biology laboratory fees are available and should cover the cost of supplies for the year. Some colleges provide additional funds for new equipment and student help, according to the needs of the department. One college makes no separate charge for laboratory fees, but includes the necessary sum for laboratory maintenance in the tuition fee for each student. Another college charges each student an incidental fee of fifteen dollars which covers all laboratory fees whether a student takes one or several laboratory courses. Out of this fee all the needs of the Biology department are met on a somewhat flexible budgetary basis.

Research in progress during the academic year was reported by 13 out of thirty colleges. Of these three also reported research

during the summer months. Seven colleges reported research for the summer months only. Ten Colleges reported no research on account of an over-loaded teaching schedule. Four of the colleges financed the research entirely. In three colleges the research was financed entirely by outside sources, and in the remainder it was carried on quite largely at a personal sacrifice on the part of staff members. A correlation between the size of the teaching load and time for research is quite apparent.

Perhaps from economic necessity and the predominance of undergraduate students, rather than from choice, the smaller college still places its major emphasis on teaching rather than on research.

However, it is to be hoped that the teaching load can in time be sufficiently decreased so that every instructor will find it possible to devote at least a small part of his time to some form of productive or creative work in a chosen field, the results of which would surely vitalize teaching, and stimulate the minds of the students with a desire to seek truth for its own sake.

MACALESTER COLLEGE,
ST. PAUL, MINNESOTA