98. Seminar in Biochemistry
Fall, Winter, Spring. 0 or 3(1-0)
Presentation and discussion of reports by graduate
students on biochemical topics of current interest.

99. Research
Fall, Winter, Spring, Summer. 3 credits. Approval of department.

BIOLOGICAL SCIENCE B S
College of Natural Science

202. Foundations of Biological Science
Fall, Winter, Spring. 4(3-1) N 193.
Primarily for elementary education majors.
Fundamental principles of biology.

211. General Biology
Fall, Winter, Spring. 5(4-4) Organic chemistry or concurrently.
Integrated course emphasizing cell structure and function, genetics, comparative morphology and physiology of living organisms and their developmental and community relationships.

212. General Biology
Fall, Winter, Spring. 5(4-4) 211.
Continuation of 211.

401. Biological Science for Teachers
Fall, 4(3-3) Bachelor’s degree.
Designed to show the nature of biological science in both its empirical and conceptual aspects. Emphasis is placed on life processes. The theories of the gene and of evolution are stressed. Macromorphology and micromorphology are covered as well as the topics of reproduction, metabolism, physiology, nutrition, enzymes, taxonomy and ecology. Quantitative developments are included whenever possible.

402. Biological Science for Teachers
Fall, Winter. 4(3-3) 401.
Continuation of 401.

403. Biological Science for Teachers
Spring. 4(3-3) 402.
Continuation of 402.

410. Biotic and Environmental Relationships
Summer. 6 credits. Approval of department. Given at W. K. Kellogg Biological Station.

420. Seminar in Recent Advances in Biological Science
Fall, Winter, Spring, Summer. 2(2-2)
May re-enroll for a maximum of 6 credits if different topic is taken. Approval of department.
A series of lectures by senior faculty of topics on the history, development, the most recent advances and the possible future and limits of the Biological Sciences.

421. Seminar on Man, “The Human Organisms”
Fall, Winter, Spring, Summer. 3(3-0) Approval of department.
The importance of new discoveries in biology for our understanding of the human organism with emphasis from the fields of genetics, molecular biology, behavior, developmental biology, physiology and ecology.

800. Problems in Biological Science
Fall, Winter, Spring. Variable credit. B.S. degree in biological science.

898. Research
Fall, Winter, Spring. Variable credit. M.S. degree in biological science or equivalent.
Research in some phase of biological science, data to form the basis for the thesis required for the doctoral degree in biological science.

899. Research
Fall, Winter, Spring. Variable credit. Approval of department.

900. Readings in Biophysics
Fall, Winter, Spring. 3 to 6 credits. Approval of department.
Reading course in special topics adapted to the individual preparation and needs of the student.

990. Biophysics Seminar
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

BOTANY AND PLANT PATHOLOGY BOT
College of Natural Science

200. Resource Ecology and Man
For course description, see Interdisciplinary Courses.

301. Elementary Plant Physiology
Fall, Winter, Spring. 4(2-4) B S 212 or one course in Botany. Not open to majors.
Processes concerned in plant life.

302. Introductory Morphology
Fall, Winter. 4(3-4) B S 212 or approval of department.
Structures and life cycles of representative plant groups showing progressive evolutionary developments.

304. Plant World
(432) Fall, Winter, Spring, Summer. 4(2-6) N S 191 or approval of department.
Basic plant science and its use in teaching. Lectures cover basic subject matter necessary to understanding plant kingdom, evidence and trends of evolution, economic uses and importance, basic principles of ecology. Laboratories give students opportunity to expand subject matter in one of several types of special projects: greenhouse, trees and shrubs, spring or summer flora, what plants do for man.

305. Poisonous Plants
Spring. 2(0-4) N S 192. Primarily for Veterinary Medicine students.
Plants poisonous to livestock and human beings, particularly those occurring in Michigan.

318. Introductory Plant Taxonomy
Spring. 3(3-2) 302 or B S 212 or approval of department.
Principles of identification, classification, nomenclature, and evolutionary relationships of vascular plants.

336. Economic Plants
Fall. 3(3-0)
Histories, characteristics, and origins of plants used in industrial processes, drug manufacture, and agriculture. Needed to broaden student’s cultural interest in plants.

400. Aquatic Plants
Spring. 3(1-4) One year of botany and zoology or approval of department.
Aquatic plants, their classification, ecology and economic importance. Relationships to problems in fisheries, in wildlife management, and to role in limnology. Experience for student in plant ecology, aquatic biology, and water sanitation.