Description — Biomechanics
of Courses

601. Osteopathic Manipulative
Medicine Clerkship
Fall, Winter, Spring, Summer. 6 credits. May reenroll for a maximum of 12 credits. Grade F in all courses offered in terms 1 through 8. Advanced training in the diagnosis of musculoskeletal dysfunctions and application of osteopathic manipulative techniques in patient care.

620. Directed Studies
Fall, Winter, Spring, Summer. 1 to 6 credits. May reenroll for a maximum of 24 credits. Approval of department. Individual or group work on special problems related to biomechanics, neuromusculoskeletal system primarily.

800. Special Topics
Fall, Winter, Spring. 1 to 4 credits. May reenroll for a maximum of 9 credits. Approval of department. Independent study in topics of biomechanics.

810. Biokinematics
Fall. 3(3-0) Approval of department. Motion of the human body including detailed studies of body joint and linkage motion.

811. Biomechanics
Winter. 3(3-0) BIM 810. Application of Newtonian mechanics to problems of force transmission and related motions in the muscular-skeletal system.

812. Theory of Tissue Mechanics
Spring. 3(3-0) Approval of department. Introduces the concepts of stress and strain in tissue and the dependency of mechanical parameters on biological factors.

850. Research Seminar
Fall, Winter, Spring. 1(1-0) May reenroll for a maximum of 3 credits. Approval of department. Discussion of current research topics in biomechanics with strong clinical application.

890. Independent Study
Fall, Winter, Spring. 1 to 8 credits. May reenroll for a maximum of 32 credits. Approval of department. Individual or group work related to biomechanics and/or neuromusculoskeletal system.

899. Master's Thesis Research
Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 12 credits. Approval of department. Conduct research for master's thesis.

BOTANY AND
PLANT PATHOLOGY

BOT

College of Agriculture and Natural Resources
College of Natural Science

201. Plants, People and the Environment (N)
Fall, Spring. 3(0-0)
Relevance of plants to modern society. Basic botanical concepts and socially significant groups of plants. Natural resource exploitation. Plants as they relate to human population growth, food production, and energy resource depletion.

205. Plant Biology
Fall. 3(3-0) High school chemistry and high school algebra.
An introduction to plant science for students seeking a general knowledge of the principles of plant biology as well as for prospective plant science majors.

206. Plant Biology Laboratory
Fall. 1(0-3) BOT 205 or concurrently. Physiological experiments and hands-on study of plant diversity at the cellular, tissue and whole plant level.

301. Introductory Plant Physiology
Winter, Spring. 4(2-4) CEM 141A or CEM 151; CEM 161; BOT 205 or S 210 or LBS 141. Introductory organic chemistry recommended. General principles of plant physiology relating plant structure to function. Topics include cell physiology, water relations, effects of light and temperature, respiration, photosynthesis, mineral nutrition, and hormone action.

302. Introductory Morphology
Winter. 4(2-4) BOT 205 or S 212 or approval of department.
Structures and life cycles of representative plant groups showing progressive evolutionary developments.

318. Introductory Plant Systematics
Spring. 4(3-0) BOT 302 or B S 212 or approval of department. Plant diversity with emphasis on identification, classification, nomenclature, and evolutionary relationships of vascular plants.

330. Forest Protection
Fall. 4(4-0) FOR 304, FOR 305, FOR 320. Interdepartmental with the departments of Entomology and Forestry. Administered by the Department of Forestry.
Procedures used to detect and respond to pest, fire and environmental problems in a variety of forest types.

335. Fossil Plants, Their History and Paleocoeology
Spring. 3(2-0) One course in geology or botany or biology department. Interdepartmental with and administered by the Department of Geology.
History of plants through geologic time; their form and evolution; how and where found, identified and reconstructed; their use in determining ancient geographic patterns, paleoenvironments, palaeoclimates and community structure. Field trip.

336. Economic Plants
Winter. 3(3-0) B OT 205 or S 212 or approval of department.
Plants used by humans viewed from economic, historical, cultural, and botanical perspectives. Emphasis on food, fiber and medicinal plants. Includes plants used for herbs, dyes, perfumes, alcoholic stimulants, ornamentals, energy.

400. Aquatic Plants
Fall. 3(2-3) BOT 318 or BOT 302. Students may not receive credit in both BOT 400 and BOT 192.
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.

400H. Honors Work
Fall, Winter, Spring. 3(0-0) Approval of department; Seniors.