ATM 437 Forecasting Practicum
The course provides students with additional forecast- ing experience. Students make at least three forecasts per week for either Long Island or a city designated by the National Forecast Contest. Students write a weather discussion for each forecast and verify their forecasts to show their progress during the semester. Pre- or Corequisite: ATM 347 1 credit

ATM 447 Senior Tutorial in Atmospheric Sciences
Independent readings in advanced topics to be arranged prior to the beginning of the semester. Weekly conferences are held with a faculty member. May be repeated once. Prerequisite: Permission of instructor and MSRC Undergraduate Programs Director 1-3 credits

ATM 487 Senior Research in Atmospheric Sciences
Under the supervision of a faculty member, a student majoring in atmospheric and oceanic sciences may conduct research for academic credit. A research proposal must be prepared by the student and submitted to the MSRC Undergraduate Director for approval before the beginning of the semester in which credit is to be given. A written report must be submitted before the end of the semester. May be repeated once. Prerequisite: Permission of instructor and MSRC Undergraduate Programs Director 0-6 credits

ATM 488 Internship
Participation in research at off-campus laboratories, including the National Weather Service. Students are required to submit to the department a proposal at the time of registration and a report at the end of the semester. May be repeated up to a limit of 12 credits. Prerequisites: ATM 347; permission of instructor and MSRC Undergraduate Program Director 0-6 credits, S/U grading

BCP Pharmacology

BCP 394-H Environmental Toxicology and Public Health
Principles of toxicology are presented and problems associated with major classes of toxic chemicals to human and environmental health are examined. Case studies dealing with current waste management issues are also discussed. This course is offered as both BCP 394 and MAR 394. Prerequisites: BIO 201; CHE 131 or 141 3 credits

BCP 400 Writing in Pharmacology
See requirements for the major in pharmacology, upper-division writing requirement. Prerequisites: Pharmacology major; U3 or U4 standing; permission of instructor S/U grading

BCP 401 Principles of Pharmacology
Basic principles and mechanisms of drug distribution, absorption, metabolism, and elimination. Principles of chemical carcinogenesis and tumor promotion. Autonomic, smooth-muscle, and CNS pharmacology. Pharmacology of specific drugs of historical interest including alcohol, antibiotics, aspirin, nicotine, and morphine. Review of antiinflammatory and thrombolytic agents, antiparasitics, and drugs for the treatment of allergic conditions and gout. Prerequisites: BIO 362; CHE 322 and 327; a g.p.a. of 3.00 or higher in these courses and their prerequisites. Corequisite for pharmacology majors: BCP 403 4 credits

BCP 402 Advanced Pharmacology
Advanced concepts of drug metabolism, pharmacokinet- ics, biochemical, and molecular mechanisms of drug action, and drug resistance in human disease states. Toxicological agents and environmental pollu- tants. The pharmacology of autoinflammatory, antiinflamma- tories, immunosuppressants, and antiasthematics. Rational drug design and drug receptor interactions using computer molecular modeling techniques. Prerequisites: BCP 401 and 403; minimum of B- in BCP 401 Corequisite: BCP 404 4 credits

BCP 403 Principles of Pharmacology Laboratory
The use of molecular modeling software for the under- standing of structure activity relationships. In vivo studies to demonstrate the pharmacological mecha- nism of action of drugs acting on the autonomic, cardio- vascular, and renal systems. Pharmacokinetic studies, using HPLC, to determine the rate of absorp- tion, distribution, and excretion of therapeutic agents. Radio- and enzyme-immunoassays for the detection of circulating hormones. Cell culture tech- niques for drug determination and evaluation. Prerequisite: Permission of instructor Corequisite: BCP 401 2 credits

BCP 404 Advanced Pharmacology Laboratory
The use of molecular modeling software for the under- standing of structure activity relationships. In vivo studies to demonstrate the pharmacological mecha- nism of action of drugs acting on the autonomic, car- diovascular, and renal systems. Pharmacokinetic studies, using HPLC, to determine the rate of absorp- tion, distribution, and excretion of therapeutic agents. Radio- and enzyme-immunoassays for the detection of circulating hormones. Cell culture techniques for drug determination and evaluation. Prerequisites: BCP 401 and 403; permission of instructor Corequisite: BCP 402 2 credits

BCP 406 Pharmacology Colloquium
Seminars on research in pharmacology and toxicology presented by faculty and distinguished scientists from academic and industrial institutions. Students are expected to develop an understanding of the scientific principles presented in the colloquium. Speakers meet with the students after the seminar to discuss research concepts and to answer questions. One-hour Journal Club/Discussion followed by one-hour seminar. May be repeated. Prerequisites: BIO 202 and 203; CHE 322; a g.p.a. of 3.00 in these courses and their prerequisites 2 credits

BCP 475 Undergraduate Teaching Practicum in Pharmacology
Prerequisites: Pharmacology major; U4 standing; permission of department 3 credits, S/U grading

BCP 487 Research in Pharmacology
Completion of an individual student research project under the supervision of a faculty member. Previously acquired laboratory course techniques and new pro- cedures are utilized. Experimental results must be submitted to the department for grade evaluation in the format of a research report. Not for credit in addi- tion to HSH 396, 398, and 399. May be repeated. Prerequisites: BIO 202 and 203; CHE 322 and 327; a g.p.a. of 3.00 in these courses and their prerequisites; permission of instructor and department 0-6 credits

BIO Biology

BIO 101-E, 102-E Biology: A Humanities Approach I, II
The major concepts of biology are presented from his- torical, contemporary, and critical viewpoints. These concepts include the cell, the gene, molecular biology, development, and evolution. The human implications or values associated with each concept are empha- sized. Not for major credit. Prerequisite to BIO 102: BIO 101 3 credits per course

BIO 103-E Introduction to Biotechnology
Gene therapy, genetic modification, cloning, stem cells, and vaccines are covered in this course. Lectures and four supplemental laboratory activities use modern equipment and techniques to illustrate core concepts which class discussions relate to health, society, and public policy. Not for biology major credit. 3 credits

BIO 111-E The Aquatic World
An introduction to the natural history of the animals and plants of the sea, rivers, and lakes, along with a consideration of water-land transitions. Weekly on- campus exhibits which students attend in addition to the regularly scheduled class time. Not for major credit. Prerequisite: High school biology 3 credits

BIO 113-E General Ecology
A survey of the principles of ecology in the context of finding solutions to local, national, and global environ- mental problems. Not for major credit. 3 credits

BIO 115-E Evolution and Society
The historical development of evolutionary thought, the evolutionary diversification of life, and the mecha- nisms of evolution are presented. The geological, genetic, and other biological principles necessary to comprehend evolutionary concepts are introduced as background. Current controversies over the evidence for evolution are reviewed. Human evolution, medical and agricultural applications of evolutionary theory, and its implications for the development of human and other social systems are considered. Not for major credit. Advisory Prerequisite: One biology course 3 credits

BIO 150-E The Living World
An exploration of life from organisms to molecules. The connections between biodiversity, molecules, and evolution are examined. Recitations/laboratories familiarize students with the tools, models, and con- cepts of modern biology. Two hours of lecture and one- two-hour recitation/laboratory per week. Prerequisites: High school biology and chemistry; satisfac- tion of entry skill in mathematics requirement 3 credits

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