BCP

Pharmacology

BCP 111: American Drug Use and Abuse: Biomedical, Socio-economic and Political Factors
This course, to be offered primarily online, introduces beginning students to the current pharmacology landscape, both in the United States and abroad. New drug discovery and the US drug approval process, for both over-the-counter and prescription pharmaceuticals, will be considered in detail and will be compared with comparable processes in other parts of the world. The ethics of American direct-to-consumer marketing of prescription pharmaceuticals will be presented and discussed.

DEC: E
SBC: STAS
3 credits

BCP 201: Introduction to Pharmacology: Drug Use & Its Molecular Basis
This course, to be offered primarily face-to-face, introduces scientifically sophisticated students to all aspects of modern pharmacology including pharmacodynamics (how drugs elicit biological responses) and pharmacokinetics (drug absorption, distribution, metabolism, and excretion). We will discuss major classes of drugs commonly used to treat illness in modern medical and veterinary practice. Agents considered will include those acting on the nervous system, the immune system, the cardiovascular, respiratory and gastrointestinal systems, and those used in treating cancer and infectious diseases. We will also consider vaccination to prevent illness.

Prerequisite: BIO 202 and CHE 132
Advisory Prerequisite: BCP 111
DEC: E
SBC: STEM+
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

SBC: WRTD
0 credit, S/U grading

BCP 401: Principles of Pharmacology

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

Prerequisites: BCP 401 and 403; minimum of B- in BCP 401
Corequisite: BCP 404
4 credits

BCP 403: Principles of Pharmacology Laboratory

Prerequisite: Permission of instructor
Corequisite: BCP 401

SBC: ESI
2 credits

BCP 404: Advanced Pharmacology Laboratory

Prerequisites: BIO 202 and 203; CHE 322; a g.p.a. of 3.00 in these courses and their prerequisites

SBC: SPK
2 credits

BCP 405: Pharmacology to Pharmacy: Practical Clinical Aspects for Non-Clarkians (Didactic)
This course, to be offered exclusively online, is designed for undergraduates interested in health care (either basic medical science-oriented or clinical). The class introduces many aspects of clinical pharmacology, but is geared toward non-clinicians. Clinical vignettes and case discussions will be presented. Several medical procedures will be first described and then demonstrated. Understanding these procedures will be integral to appreciating the vignettes and clinical case discussions. The multidisciplinary course faculty will include physicians, scientists, educators, nurses and pharmacists. Enrolled students will have the opportunity to ask questions directly through online chats.

Prerequisite: U3 or U4 status or permission of the instructor

SBC: ESI
3 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

SBC: SPK
2 credits

BCP 444: Experiential Learning
This course is designed for students who engage in a substantial, structured experiential
learning activity in conjunction with another class. Experiential learning occurs when knowledge acquired through formal learning and past experience are applied to a "real-world" setting or problem to create new knowledge through a process of reflection, critical analysis, feedback and synthesis. Beyond-the-classroom experiences that support experiential learning may include: service learning, mentored research, field work, or an internship.

**Prerequisite:** WRT 102 or equivalent; permission of the instructor and approval of the EXP+ contract (http://sb.cc.stonybrook.edu/bulletin/current/policiesandregulations/degree_requirements/EXPplus.php)

**SBC:** EXP+

0 credit, S/U grading

**BCP 475: Undergraduate Teaching Practicum in Pharmacology**

**Prerequisites:** Pharmacology major; U4 standing; permission of department

**SBC:** EXP+

3 credits, S/U grading

**BCP 480: Introduction to Research Topics in Pharmacology**

Introduces undergraduate students to the research that is occurring in the laboratories of Pharmacology faculty. We will discuss experimental techniques and how they are utilized to investigate scientific questions within the various fields under the umbrella of Pharmacological Sciences. Areas covered will include immunology, neuroscience, cancer, development, structural biology, cell signaling, and stem cells. Students will be required to prepare a presentation on research actively occurring within the Pharmacology department.

**Prerequisite:** BCP 201 or BCP 401 or BIO 310 or BIO 361

**SBC:** TECH

1 credit

**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 procedures are utilized. Experimental results must be submitted to the department for grade evaluation in the format of a research report. Not for credit in addition to HBH 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

**SBC:** EXP+

0-6 credits

**BCP 488: Internship**

Research participation in off-campus laboratories, the pharmaceutical industry, and other academic and public agencies. Repeatable up to 12 credits.

**Prerequisites:** BIO 361; CHE 322; g.p.a. of 3.00 or higher in these courses and their prerequisites; permission of department

**SBC:** EXP+

0-6 credits, S/U grading