

LIST OF REQUIRED AND SUPPORTING COURSES FOR FORENSIC SCIENCE BIOLOGY AND CHEMISTRY OPTIONS SP2017

FBIOL LIST A: Required Additional Courses (Select 6 credits)

(Prerequisites are in parentheses)

BMB 402 (3) General Biochemistry II (BMB 401 or CHEM 476)

BMB 428 (3) Physical Chemistry with Biological Applications (CHEM 203 or CHEM 212; PHYS 203 or PHYS 251; 3 credits cell biology) FA Only

BMB/BIOL 430 (3) Developmental Biology (BIOL 222; BMB251 or BIOL 230W) FA Only

BMB 433/VB SC (3) Molecular and Cellular Toxicology (BMB 401) SP Only

BMB 474 (3) Analytical Biochemistry (Prereq or concurrent: B M B 428 or CHEM 450) SP Only

BMB 484 (3) Functional Genomics (BMB 251 or BIOL 230W, BIOL 222 or BIOL 322) SP Only

BIOL 405 (3) Molecular Evolution (BIOL 222 or 230W) SP Only

BIOL 422 (3) Advanced Genetics (One genetics or genetic based course including BIOL 133, BIOL 222, BIOL 322 or BIOL 230W) FA Only

BIOL 428 (3) Population Genetics (BIOL 220W, STAT 250; MATH 111 or MATH 141) Not Offered Every Year

BIOL 432 (3) Developmental Genetics (BIOL 230W; or BMB 251, BMB 252) FA Only

BIOL/ANTH 460 (3) Human Genetics (ANTH 021 or BIOL 110 or BIOL 133 or permission of program for a different course that covers introductory genetics topics for at least part of the semester) Not Offered Every Year

MICRB 410 (3) Principles of Immunology (BMB 251, MICRB 201, or MICRB 251)

FCHEM LIST A: Required Additional Courses (Select 9 credits)

(Prerequisites are in parentheses)

BMB 401 (3) General Biochemistry I (CHEM 212; B M B 251 or BIOL 230)

BMB 402 (3) General Biochemistry II (BMB 401 or CHEM 476)

BMB 428 (3) Physical Chemistry with Biological Applications (CHEM 203 or CHEM 212; PHYS 203 or PHYS 251; 3 credits cell biology) FA

BMB 433/VB SC (3) Molecular and Cellular Toxicology (BMB 401) SP Only

CHEM 310 (3) Introductory Inorganic Chemistry (CHEM 112 and CHEM 202 or CHEM 210; Prerequisite or concurrent: CHEM 450 or CHEM 452)

CHEM 410 (3) Inorganic Chemistry

CHEM 412 (3) Transition Metal Chemistry (CHEM 202 or CHEM 210 and CHEM 310; Prerequisite or concurrent: CHEM 450 or CHEM 452) FA

CHEM 423 (4) Chemical Spectroscopy (CHEM 227 or CHEM 221, CHEM 450 or prerequisite or concurrent: CHEM 452) SP Only

CHEM 430 (3) Structural Analysis of Organic Compounds (CHEM 210 and CHEM 213; Concurrent: CHEM 213) SP Only

CHEM 431W (3) Organic and Inorganic Preparations (CHEM 213) FA Only

CHEM 450 (3) Physical Chemistry - Thermodynamics (CHEM 112 and MATH 141 and PHYS 211 or PHYS 212)

CHEM 452 (3) Physical Chemistry – Quantum Chemistry (CHEM 112 and MATH 141 and PHYS 211 or PHYS 212)

CHEM 474 (3) Organic Synthesis (CHEM 212)

VB SC 330 (3) Intro to Molecular Pharmacology (CHEM 201, CHEM 202, BIOL 110, BMB 211; BIOL 230 or BMB 251) SP only (pre-req waived)

VB SC 430 (3) Principles of Toxicology (BIOL 110, BIOL 240W; BMB 211 or BMB 401) FA Only

VB SC 431 (3) Environmental Toxicology (BIOL 110, CHEM 112, CHEM 112) FA only

Combined LIST B (both FCHEM and FBIOL options): Recommended Supporting Courses (Select 6 credits)

(Prerequisites are in parentheses)

Anything listed on List A for both options

ANTH 410 (3) Osteology (3 credits in ANTH, 3 credits in BIOL, or concurrent enrollment in ANTH 401 or 501. FA Only

ANTH 411 (3) Skeletal Forensic Anthropology (Prerequisite of ANTH 021, waived by department) FA Only

ANTH 413 (3) Molecular Forensic Anthropology (ANTH 021 or Forensic Science major) SP Only

ANTH 466 (3) The Skull (ANTH 021) SP Only

BBH/HPA 440 (3) Principles of Epidemiology (BB H 101 or BIOL 110 or H P A 310; STAT 200 or STAT 250)

BIOL 222* (3) Genetics (3 credits in biological sciences) FA Only

-or- BIOL 322* (3) Genetic Analysis (at least two of the following courses: BIOL 220W, BIOL 230W, BIOL 240W or MICRB 201) SP Only

BIOL 414 (3) Taxonomy of Seed Plants (BIOL 240W) Maymester/Odd scheduling

BIOL 437 (3) Histology (BIOL 230W) SP Only

BIOL 472 (3) Mammalian Physiology (Prerequisite of BIOL 240W)

CHEM 227* (4) Analytical Chemistry (CHEM 113 and MATH 140)

CHEM 402 (3) Chemistry in the Environment (CHEM 212. Prerequisite or concurrent: CHEM 450 or CH E 320) SP Only

CRIM/WMNST 423[◇] (3) Sexual and Domestic Violence (CRIM 100 or WMNST 001)

CRIM/CRIMJ 424[◇] (3) Drugs and Crime (CRIM 100 or WMNST 100)

CRIM 425[◇] (3) Organized Crime (Prerequisite of CLJ 250W) Harrisburg—FA Only

CRIM 432[◇] (3) Crime and the American Court System (CRIM 100)

CRIM/WMNST 453[◇] (3) Women and the Criminal Justice System (CRIM 100 or WMNST 001)

CRIM 467[◇] (3) Law and Society (CRIM 100 or CRIM 113)

CRIM 469[◇] (3) Seminar in the Law (CRIM 113) Evening

CRIM 482[◇] (3) Seminar, Criminal Justice Agency Administration (CRIM 100) Evening

ENT 313 (2) Introduction to Entomology

ENT 410 (3) Insect Structure and Function (Prerequisite of BIOL 220W and 240W) SP Only

ENT 450 (3) Medical Entomology (ENT 313 or BIOL 011 and BIOL 012 or BIOL 110 or BIOL 220W)

FRNSC 427W (4) Forensic Chemistry (Prerequisite of CHEM 227)

FRNSC 496 (3-4) Independent Research

PSYCH 445[◇] (3) Forensic Psychology (PSYCH 100; PSYCH 239, PSYCH 243, or PSYCH 270) SP Only

PSYCH 462[◇] (3) Physiological Psychology (PSYCH 100; PSYCH 260 or 3 credits of BIOL)

PSYCH 470[◇] (3) Abnormal Psychology (PSYCH 100; PSYCH 238, PSYCH 243 or PSYCH 270)

F SC 401 (3) Introduction to Fuel Technology (CHEM 112 and PHYS 211) FA Only

F SC/CH E 432 (3) Petroleum Processing (CHEM 210) FA Only

*Cannot double count if required in option.

◇Only 3 credits of CRIM/CRIMJ/WMNST/PSYCH are allowed.