

Biomedical Laboratory Science Major Recommended Course Plan 2022-23

CORE PLAN - CONSULT BLS ADVISOR TO STAY ON TRACK IN PROGRAM

Freshman Fall	Freshman Spring
**CEM 141 General Chemistry (4) **CEM 161 Chemistry Lab I (1) **MTH (based on math placement) (3-5) <input type="checkbox"/> BLD 121 Survive & Thrive Freshman Seminar (1) <input type="checkbox"/> ISS 2XX Int Stud Social Sci (4)	**WRA 101 Writing, Rhetoric, American Culture (4) **BS 161 Cell and Molecular Biology (3) **BS 171 Cell and Molecular Biology Lab (2) <input type="checkbox"/> MTH 124/132 Calculus (3) **CEM 162 Chemistry Lab II (1) <input type="checkbox"/> Elective
Sophomore Fall	Sophomore Spring
<input type="checkbox"/> BLD 213L Clinical Laboratory Methods (2) **CEM 251 Organic Chemistry I (3) **PHY 231 Introductory Physics (3) **PSL 310 Physiol for Pre-Health Prof (4) **STT 231 (or STT 200) Statistics (3)	**CEM 252 Organic Chemistry II (3) **PHY 232 Introductory Physics II (3) <input type="checkbox"/> BLD 313 Quality Medical Laboratory Methods (3) <input type="checkbox"/> BLD 204 Mechanisms of Disease (3) <input type="checkbox"/> MMG 201 Fundamentals of Microbiology (3)
Junior Fall	Junior Spring
<input type="checkbox"/> BLD 434 Clinical Immunology (3) <input type="checkbox"/> BLD 324 Hematology and Hemostasis (3) <input type="checkbox"/> BLD 314L Adv Clinical Laboratory Methods (1) **BMB 401 Basic Biochemistry (4) <input type="checkbox"/> IAH 201-210 Int Stud in Arts and Hum (4)	<input type="checkbox"/> BLD 430 Molecular Diagnostics (2) **MMG 365 Medical Microbiology (3) <input type="checkbox"/> MMG 365L Medical Microbiology Lab (1) <input type="checkbox"/> BLD 302 Clinical Chemistry (2) <input type="checkbox"/> BLD 435 Immunohematology (2) <input type="checkbox"/> ISS 3XX Int Stud Social Sci (4)

APPLY TO MLS PROGRAM IN DECEMBER OR PICK A BLS CONCENTRATION FOR SENIOR YEAR

BLS Concentration options	Career Pathways
Advanced Biomedical Technologies: Advanced focus on laboratory applications, immunology theory, emphasis in clinical, forensic, and research areas.	Reference/research/industry labs, bioinformatics, genetic counseling, grad school, pre-MD/DO/PA/PharmD/Vet/ path assistant, transplantation science
Clinical Chemistry: Advanced focus in clinical chemistry methods and correlations	Toxicology/forensics labs, pharma industry, grad school, pre-MD/DO/PA/PharmD/Vet/path assistant
Hematology and Hemostasis: Advanced focus in diagnostic testing related to hematologic and hemostatic diseases.	Research/industry lab, graduate school, oncology, pre-MD/DO/PA/PharmD/Vet/path assistant
Medical Laboratory Science: Advanced preparation for accredited medical laboratory science internship covering clinical chemistry, medical microbiology, hematology/hemostasis, and immunohematology	Diagnostic medical laboratories including hospitals, reference labs, doctor's offices, graduate school, quality assurance, pre-MD/DO/PA/PharmD/Vet/path assistant, DCLS
Medical Microbiology: Advanced focus in medical microbiology laboratory diagnosis, epidemiology and prevention	Public health, epidemiology, infection control, graduate school, pre-MD/DO/PA/PharmD/Vet/path assistant

NOTE: Courses with ** are recommended for pre-professional students preparing to take the MCAT. Additional courses not required in BLS major include: CEM 142, CEM 255, BS 162, BS 172, PHY 251, PHY 252, ANTR 350, PSY 101, SOC 100

*Many of the courses in the Arts and Humanities and Social, Behavioral, and Economic Sciences arenas, emphasize national diversity (designated "N" at the end of the course title), or international and multi-cultural diversity (designated "I" at the end of the course title). Some courses emphasize both national diversity, and international and multi-cultural diversity (designated "D" at the end of the course title). Students must include at least one "N" course and one "I" course in their Integrative Studies programs. A "D" course may meet either an "N" or an "I" requirement but not both

SEE BACK OF SHEET FOR BLS CONCENTRATION PLANNING OPTIONS

BLS SENIOR YEAR PLANNING GUIDE

Advanced Biomedical Technologies:

- 1) CMSE 201 Intro to Computational Modeling (F/S)
- 2) BLD 461 Adv Biomed Technologies (F)
- 3) BLD 461L Adv Biomed Technologies Lab (F)
- 4) BLD 456 Med Lab Prof (F/S)
- 5) IAH 211+ Int Arts Humanities (F/S)
- 6) pick all of the following: BLD 439 Histocompatibility & Immunogenetics (S), BLD 446 Immunobio of Neoplasia (S),
 BLD 447 Immunotherapy & Immunomodulation (S)

OR

- 6) pick one of the following: CMSE 202 Computational Modeling & Data Analysis II, (F/S),
 MMG 431 Micro Genetics (F), MMG 465 Adv Med Micro (F)

Clinical Chemistry:

- 1) BLD 402 Adv Clin Chem (F)
- 2) CEM 333 Instr. Meth and Apps (S)
- 3) BLD 456 Med Lab Prof (F/S)
- 4) IAH 211+ Int Arts Humanities (F/S)
- 5) Selective 1 [BE 230, CEM 255, CEM 262, CEM 311, CEM 383, PHM 350, PHM 321, PHM 430, PHM 450]
- 6) Selective 2 [BE 230, CEM 255, CEM 262, CEM 311, CEM 383, PHM 350, PHM 321, PHM 430, PHM 450]
(S) (F/S/Su) (F/S/Su) (S) (F) (F/S/Su) (S) (Su) (F/S/Su)

Medical Microbiology:

- 1) MMG 465 Adv Med Micro (F)
- 2) MMG 465L Adv Med Micro Lab (F)
- 3) MMG 461 Mol Path (S)
- 4) BLD 456 Med Lab Prof (F/S)
- 5) IAH 211+ Int Arts Humanities (F/S)
- 6) Selective [BLD 461, BE 230, BLD 366, BLD 861, EPI 390, HM 801, MMG 413, MMG 421, MMG 431]
(F) (S) (Su) (F) (S) (F/S/Su) (S) (F) (F)

Hematology and Hemostasis:

- 1) BLD 424 Adv Heme and Hemo (S)
- 2) BLD 424L Adv Heme, Hemo & Urine Lab (S)
- 3) pick two: BLD 439 Histo and Immunogen (S), BLD 446 Immunobio of Neoplasia (S),
 BLD 447 Immunomod & Immunother(S)
- 4) BLD 456 Med Lab Prof (F/S)
- 5) IAH 211+ Int Arts Humanities (F/S)
- 6) Selective [BLD 815, IBIO 341, IBIO 408, IBIO 425, IBIO 450, MMG 409, PHM 350]
(S) (F/S/Su) (F) (S) (S) (S) (F/S/Su)

Medical Laboratory Science:

- 1) BLD 402 Adv Clin Chem (F)
- 2) BLD 424 Adv Heme and Hemo (S)
- 3) BLD 424L Adv Heme, Hemo, and Urine Lab (S)
- 4) BLD 435L Immunochem Lab (S)
- 5) MMG 465 Adv Med Micro (F)
- 6) MMG 465L Adv Med Micro Lab (F)
- 7) BLD 456 Med Lab Prof (F/S)
- 8) IAH 211+ Int Arts Humanities (F/S)