

## Biomedical Laboratory Science Major Recommended Course Plan 2019-20

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

Freshman Fall	Freshman Spring
<ul style="list-style-type: none"> <li><input type="checkbox"/> CEM 141 General Chemistry (4)</li> <li><input type="checkbox"/> CEM 161 Chemistry Lab I (1)</li> <li><input type="checkbox"/> MTH (based on math placement) (3-5)</li> <li><input type="checkbox"/> BLD 121 Survive &amp; Thrive Freshman Seminar (1)</li> <li><input type="checkbox"/> ISS 2XX Int Stud Social Sci (4)</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> WRA 101 Writing, Rhetoric, American Culture (4)</li> <li><input type="checkbox"/> BS 161 Cell and Molecular Biology (3)</li> <li><input type="checkbox"/> BS 171 Cell and Molecular Biology Lab (2)</li> <li><input type="checkbox"/> MTH 124/132 Calculus (3)</li> <li><input type="checkbox"/> CEM 162 Chemistry Lab II (1)</li> <li><input type="checkbox"/> Elective</li> </ul>

Sophomore Fall	Sophomore Spring
<ul style="list-style-type: none"> <li><input type="checkbox"/> BLD 213L Clinical Laboratory Methods (2)</li> <li><input type="checkbox"/> CEM 251 Organic Chemistry I (3)</li> <li><input type="checkbox"/> PHY 231 Introductory Physics (3)</li> <li><input type="checkbox"/> PSL 310 Physiol for Pre-Health Prof (4)</li> <li><input type="checkbox"/> STT 231 (or STT 200) Statistics (3)</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> CEM 252 Organic Chemistry II (3)</li> <li><input type="checkbox"/> PHY 232 Introductory Physics II (3)</li> <li><input type="checkbox"/> BLD 313 Quality Medical Laboratory Methods (3)</li> <li><input type="checkbox"/> BLD 204 Mechanisms of Disease (3)</li> <li><input type="checkbox"/> MMG 201 Fundamentals of Microbiology (3)</li> </ul>

Junior Fall	Junior Spring
<ul style="list-style-type: none"> <li><input type="checkbox"/> BLD 434 Clinical Immunology (3)</li> <li><input type="checkbox"/> BLD 324 Hematology and Hemostasis (3)</li> <li><input type="checkbox"/> BLD 314L Adv Clinical Laboratory Methods (1)</li> <li><input type="checkbox"/> BMB 401 Basic Biochemistry (4)</li> <li><input type="checkbox"/> IAH 201-210 Int Stud in Arts and Hum (4)</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> BLD 430 Molecular Diagnostics (2)</li> <li><input type="checkbox"/> MMG 365 Medical Microbiology (3)</li> <li><input type="checkbox"/> MMG 365L Medical Microbiology Lab (1)</li> <li><input type="checkbox"/> BLD 302 Clinical Chemistry (2)</li> <li><input type="checkbox"/> BLD 435 Immunohematology (2)</li> <li><input type="checkbox"/> ISS 3XX Int Stud Social Sci (4)</li> </ul>

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

BLS Concentration options	Career Pathways
<b>Clinical Chemistry:</b> Advanced focus in clinical chemistry methods and correlations	Toxicology/forensics labs, pharma industry, grad school, pre-MD/DO/PA/PharmD/Vet/path assistant
<b>Immunology:</b> Advanced focus in immunology theory and laboratory applications	Immunology reference lab, flow cytometry research, grad school, pre-MD/DO/PA/PharmD/Vet/path assistant, transplantation science
<b>Medical Microbiology:</b> 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
<b>Hematology and Hemostasis:</b> 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
<b>Medical Laboratory Science:</b> 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
<b>Molecular Diagnostics:</b> Advanced focus on molecular diagnostics with emphasis in clinical, forensic, and research areas	Research/industry labs, forensics, genetic counseling, bioinformatics, graduate school, pre-MD/DO/PA/path assistant
<b>Minor in Information Technology:</b> Advanced preparation in laboratory information systems	Hospital laboratory or public health information systems, software quality/support and systems development

**SEE NEXT PAGE FOR BLS CONCENTRATION PLANNING OPTIONS**

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### BLS SENIOR YEAR PLANNING GUIDE

**Clinical Chemistry: 1)**  BLD 402 Adv Clin Chem, 2)  BLD 456 Med Lab Prof, 3)  CEM 333 Instr Meth and Apps, 4)  IAH 211+ Int Arts Humanities, 5)  Selective 1,  Selective 2

Selective options: BE 230, CEM 255, CEM 262, CEM 311, CEM 383, PHM 350, PHM 321, PHM 430, PHM 450

**Immunology: 1)**  BLD 452L Immuno Lab, 2)  BLD 456 Med Lab Prof 3) pick two:  BLD 439 Histo and Immunogen,  BLD 446 Immunobio of Neoplasia,  BLD 447 Immunomod & Immunother, 4) pick one:  MMG 409 Euk Cell Bio or  MMG 461 Mol Path, 5)  IAH 211+ Int Arts Humanities, 6)  Selective

Selective options: MMG 465, MMG 431, IBIO 341, EPI 390

**Medical Microbiology: 1)**  MMG 465 Adv Med Micro, 2)  MMG 465L Adv Med Micro Lab, 3)  BLD 456 Med Lab Prof, 4)  MMG 461 Mol Path, 5)  IAH 211+ Int Arts Humanities, 6)  Selective

Selective options: BE 230, BLD 366, BLD 861, EPI 290, EPI 390, HM 801, MMG 413, MMG 421, MMG 431

**Hematology and Hemostasis: 1)**  BLD 424 Adv Heme and Hemo, 2)  BLD 424L Adv Heme, Hemo & Urine Lab, 3)  BLD 456 Med Lab Prof, 4) pick two:  BLD 439 Histo and Immunogen,  BLD 446 Immunobio of Neoplasia,  BLD 447 Immunomod & Immunother, 5)  IAH 211+ Int Arts Humanities, 6)  Selective

Selective options: BLD 815, IBIO 341, IBIO 408, IBIO 425, IBIO 450, MMG 409, PHM 350

**Medical Laboratory Science: 1)**  BLD 402 Adv Clin Chem, 2)  BLD 424 Adv Heme and Hemo, 3)  BLD 424L Adv Heme, Hemo, and Urine Lab, 4)  BLD 435L Immunochem Lab, 5)  MMG 465 Adv Med Micro, 6)  MMG 465L Adv Med Micro Lab, 7)  BLD 456 Med Lab Prof, 8)  IAH 211+ Int Arts Humanities

**Molecular Diagnostics: 1)**  BLD 430L Mol Diag Lab, 2)  BLD 460 Adv Mol Diag, 3)  CMSE 201 Intro Comp Modeling, 4)  BLD 456 Med Lab Prof, 5)  IAH 211+ Int Arts Humanities, 5)  Selective

Selective options: MMG 409, MMG 431, MMG 433

**Minor in Information Technology: 1)**  CSE 102 Algorith Think/Prgm, 2)  CSE 201 Fund Info Tech, 3) CSE 231 Intro Prog I, 4)  ITM 311 Sys Analysis Design, 5)  MI 201 Media Info Tech, 6)  IAH 211+ Int Arts Humanities, 7)  BLD 456 Med Lab Prof, 8)  BLD 443 Intro Lab Info Sys, 9)  BLD 444 Lab Info Tech Pract/Project Management

**NOTE: THE COURSES FOR THE IT MINOR SHOULD BEGIN IN FRESHMAN OR SOPHMORE YEAR**

\*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