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

**Freshman Fall Freshman Spring**

\*\*CEM 141 General Chemistry (4) \*\*WRA 101 Writing, Rhetoric, American Culture (4)

\*\*CEM 161 Chemistry Lab I (1) \*\*BS 161 Cell and Molecular Biology (3)

\*\*MTH (based on math placement) (3-5) \*\*BS 171 Cell and Molecular Biology Lab (2)

□ BLD 121 Survive & Thrive Freshman Seminar (1) □ MTH 124/132 Calculus (3)

□ ISS 2XX Int Stud Social Sci (4) \*\*CEM 162 Chemistry Lab II (1)

□ Elective

**Sophomore Fall Sophomore Spring**

□ BLD 213L Clinical Laboratory Methods (2) \*\*CEM 252 Organic Chemistry II (3)

\*\*CEM 251 Organic Chemistry I (3) \*\*PHY 232 Introductory Physics II (3)

\*\*PHY 231 Introductory Physics (3) □ BLD 313 Quality Medical Laboratory Methods (3)

\*\*PSL 310 Physiol for Pre-Health Prof (4) □ BLD 204 Mechanisms of Disease (3)

\*\*STT 231 (or STT 200) Statistics (3) □ MMG 201 Fundamentals of Microbiology (3)

**Junior Fall Junior Spring**

□ BLD 434 Clinical Immunology (3) □ BLD 430 Molecular Diagnostics (2)

□ BLD 324 Hematology and Hemostasis (3) \*\*MMG 365 Medical Microbiology (3)

□ BLD 314L Adv Clinical Laboratory Methods (1) □ MMG 365L Medical Microbiology Lab (1)

\*\*BMB 401 Basic Biochemistry (4) □ BLD 302 Clinical Chemistry (2)

□ IAH 201-210 Int Stud in Arts and Hum (4) □ BLD 435 Immunohematology (2)

□ ISS 3XX Int Stud Social Sci (4)

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

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| **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 (**□ **total 120 credits to graduate):**

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(**□ **total 120 credits to graduate):**

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) (F/S) (Su) (F/S/Su)

**Medical Microbiology(**□ **total 120 credits to graduate):**

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, PH 801, MMG 413, MMG 421, MMG 431]

(F) (S) (Su) (F) (S/Su) (F/S/Su) (S) (F) (F)

**Hematology and Hemostasis(**□ **total 120 credits to graduate):**

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(**□ **total 120 credits to graduate):**

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 Immunohem 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)