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| **Catalog Year 2020-2021****B.S. Medical Laboratory Science** | ***(For internal use )***[ ]  *No change*[ ]  *UCC proposal* |

A Major Academic Plan (MAP) is one way to complete a degree in a set number of semesters. The *example* below is only one strategy. Actual plans for individual students will vary based on advisor recommendations and academic needs. Official Program Requirements including Major, General Education, Electives, and university requirements (see pg.2) are based on Catalog Year.

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| **Course Subject and Title** | **Cr.**  | **Min.** **Grade** | **\*GE,** **UU or UM** | **\*\*Sem. Offered** | **Prerequisite** | **Co-Requisite** |
| Semester One |
| GE Objective 1: ENGL 1101 Writing and Rhetoric I | 3 | C- | GE |  | Appropriate placement score |  |
| GE Objective 5: BIOL 1101 & Lab Biology I | 4 |  | GE | F,S,Su | Able to place into Math 1108 |  |
| GE Objective 3: MATH 1143 | 3 |  | GE | F,S,Su | MATH 1108 |  |
| GE Objective 2: COMM 1101 Principles of Speech | 3 |  | GE | F,S,Su |  |  |
|  Total | 13 |  |  |  |  |  |
| Semester Two |
| GE Objective 1: ENGL 1102 Writing and Rhetoric II | 3 | C- | GE |  | ENGL 1101 or equivalent |  |
| GE Objective 5: CHEM 1111 & 1111L Gen Chem and lab | 5 |  | GE | F,S,Su | MATH 1143 or 1147 |  |
| GE Objective 6: | 3 |  | GE |  |  |  |
| GE Objective 4:  | 3 |  | GE |  |  |  |
|  Total | 14 |  |  |  |  |  |
| Semester Three |
| CHEM 1112 & 1112L General Chemistry II and lab | 4 |  |  | F,S,Su | CHEM 1111, MATH 1143 or 1147 |  |
| BIOL 3301 Anatomy & Physiology and 3301Lab | 4 | C- |  | F,S | BIOL 1101 |  |
| BIOL 2206 Cell Biology and BIOL 2207 Cell Biology Lab | 4 | C- |  | F,S | BIOL 1101, 1102, CHEM 1111, 1112 | CHEM 1112 |
|  Total | 12 |  |  |  |  |  |
| Semester Four |
| BIOL 2235 General Microbiology and 2235L | 4 |  |  | F,S | BIOL 1101, 1102, CHEM 1112 |  |
| BIOL 3302 Anatomy & Physiology and 3302Lab | 4 | C- | UM | F,S | BIOL 1101 |  |
| GE Objective 7 or 8:  | 3 |  | GE |  |  |  |
| GE Objective 6: | 3 |  | GE |  |  |  |
|  Total | 14 |  |  |  |  |  |
| Semester Five |
| Chemistry Electives | 7 | C- |  |  |  |  |
| Either BIOL 4463 & 4463L Human Pathophysiology  (or BIOL 3305 Introduction to Pathobiology) | 3-4  | C- | UM | F | BIOL 3301, 3302  |  |
| GE Objective 4 | 3 |  | GE |  |  |  |
|  Total | 13-14 |  |  |  |  |  |
| Semester Six **( Apply to MLS program by February)** |
| BIOL 3358 Genetics | 3 |  | UM | F,S | BIOL 2206 or BIOL 2235 |  |
| BIOL 4451 Immunology | 3 |  | UM | F | BIOL 2221 or BIOL 2235 |  |
| GE Objective 9: | 3 |  | GE |  |  |  |
| **(May choose to take 3 elective credits to be full time)** Total  | 9 |  |  |  |  |  |
| Semester Seven |
| MLS 4410 Phlebotomy Practicum | 1 | C- | UM | F | Acceptance to MLS program |  |
| MLS 4412 Urinalysis and Body Fluids | 1 | C- | UM | F | Acceptance to MLS program |  |
| MLS 4414 Hematology & Hemostasis | 3 | C- | UM | F | Acceptance to MLS program |  |
| MLS 4416 Medical Microbiology  | 3 | C- | UM | F | Acceptance to MLS program |  |
| MLS 4418 Medical Chemistry & Instrumentation | 3 | C- | UM | F | Acceptance to MLS program |  |
| MLS 4420 Medical Immunology | 2 | C- | UM | F | Acceptance to MLS program |  |
| MLS 4422 Basic Concepts Transfusion Medicine | 2 | C- | UM | F | Acceptance to MLS program |  |
| MLS 4424 Medical Laboratory Fundamentals | 1 | C- | UM | F | Acceptance to MLS program |  |
|  Total  | 16 |  |  |  |  |  |
| Semester Eight  |
| MLS 4431 Medical Microbiology II | 3 | C- | UM | S | Acceptance to MLS program, MLS 4416 |  |
| MLS 4433 MLS Management & Education | 2 | C- | UM | S | Acceptance to MLS program |  |
| MLS 4435 Molecular Diagnosis | 3 | C- | UM | S | Acceptance to MLS program |  |
| MLS 4437 Critical Analysis of Lab Information | 3 | C- | UM | S | Acceptance to MLS program |  |
| MLS 4439 Advanced Concepts in Transfusion Medicine | 2 | C- | UM | S | Acceptance to MLS program, MLS 4422 |  |
| MLS 4441 MLS Research **(may choose to take 1 to 3 credits)** | 1-3 | C- | UM | S | Acceptance to MLS program |  |
| MLS 4455 MLS Student Laboratory Practices | 2 | C- | UM | S | Acceptance to MLS program |  |
|  Total  | 16-18 |  |  |  |  |  |
| Summer Practicum |
| MLS 4490 General Site Practicum  | 1 or 6 |   | UM | F,S,Su | Acceptance to MLS program |  |
| MLS 4491 Microbiology Practicum | 2 |  | UM | F,S,Su | Acceptance to MLS program |  |
| MLS 4492 Hematology an Urinalysis Practicum | 2 |  | UM | F,S,Su | Acceptance to MLS program |  |
| MLS 4493 Transfusion Blood Bank Practicum | 1 |  | UM | F,S,Su | Acceptance to MLS program |  |
| MLS 4494 Chemistry and Automation Practicum | 1 |  | UM | F,S,Su | Acceptance to MLS program |  |
| Free Electives | 0-6 |  |  |  |  |  |
| Total | 12-13 |  |  |  |  |  |
| \*GE=General Education Objective, UU=Upper Division University, UM= Upper Division Major \*\*See Course Schedule section of Course Policies page in the e-catalog (or input F, S, Su, etc.)  |

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| **2020-2021 Major Requirements** | **CR** | **GENERAL EDUCATION OBJECTIVES****Satisfy Objectives 1,2,3,4,5,6 (7 or 8) and 9** | **36 cr. min** |
| **MAJOR REQUIREMENTS** | **75-83** | 1. Written English (6 cr. min) ENGL 1101 | 3 |
| **Program Required Pre-Requisite Courses:** | **21-22** |  ENGL 1102 | 3 |
|  |  | 2. Spoken English (3 cr. min) COMM 1101 | 3 |
| BIOL 2206/BIOL 2207 Cell Biology and Lab | 4 | 3. Mathematics (3 cr. min) MATH 1143 | 3 |
| BIOL 2235/BIOL 2235L General Microbiology and Lab | 4 | 4. Humanities, Fine Arts, Foreign Lang. **(2 courses; 2 categories; 6 cr. min)** |
| BIOL 3301/BIOL 3301L Anatomy and Physiology and Lab | 4 |  |  |
| BIOL 3358 Genetics | 3 |  |  |
| BIOL 4451 Immunology | 3 | 5. Natural Sciences **(2 lectures-different course prefixes, 1 lab; 7 cr. min)** |
| Either BIOL 4463 Human Pathophysiology  | 3-4 | BIOL 1101/1101L | 4 |
|  (or BIOL 3305 Introduction to Pathobiology 4 cr) |  | CHEM 1111 and 1111L | 5 |
| **Other Required and Pre-Requisite Courses** | **15** |  |  |
| BIOL 1101 and Lab Biology I and Lab (Counted in GE Obj. 5) | 6. Behavioral and Social Science **(2 courses-different prefixes; 6 cr. min)** |
| CHEM 1111 General Chemistry I and 1111L (Counted in GE Obj. 5) |  |  |
| CHEM 1112/CHEM 1112L General Chemistry II | 4 |  |  |
| BIOL 3302/BIOL 3302L Anatomy and Physiology and Lab | 4 | One Course from EITHER Objective 7 OR 8 **(1course; 3 cr. min)** |
| Additional Chemistry Courses to reach 16 credits  |  7 | 7. Critical Thinking |  |
| MATH 1143 College Algebra (counted in GE Obj. 3) | 8. Information Literacy  |
|  |  | 9. Cultural Diversity **(1 course; 3 cr. min)** |
| **Professional Degree Requirements** | **32-34** |  |  |
| MLS 4410 Phlebotomy Practicum | 1 | General Education Elective to reach 36 cr. min. **(if necessary)** |
| MLS 4412 Urinalysis and Body Fluids | 1 |   |  |
| MLS 4414 Hematology & Hemostasis | 3 |  **Total GE** | **39** |
| MLS 4416 Medical Microbiology | 3 | Undergraduate Catalog and GE Objectives by [Catalog Year](https://www.isu.edu/advising/academic-support/general-education/) *http://coursecat.isu.edu/undergraduate/programs/* |
| MLS 4418 Medical Chemistry & Instrumentation | 3 |
| MLS 4420 Medical Immunology | 2 |  |
| MLS 4422 Basic Concepts Transfusion Medicine | 2 |
| MLS 4424 Medical Laboratory Fundamentals | 1 |
| MLS 4431 Medical Microbiology II | 3 | **MAP Credit Summary** | **CR** |
| MLS 4433 Medical Lab Science Management & Education | 2 | Major  | 75-83 |
| MLS 4435 Molecular Diagnosis | 3 | General Education  | 39 |
| MLS 4437 Critical Analysis of Lab Information | 3 | Upper Division Free Electives to reach 36 credits | 0 |
| MLS 4439 Advanced Concepts in Transfusion Medicine | 2 | Free Electives to reach 120 credits | 0-6 |
| MLS 4441 MLS Research | 1-3 |  TOTAL | 120-122 |
| MLS 4455 MLS Student Laboratory Practices | 2 |  |
|  |  |
| **Required Practicum Experience** | **7 or 12** |
| MLS 4490 General Site Practicum | 1 or 6 |
| MLS 4491 Microbiology Practicum | 2 | **Graduation Requirement Minimum Credit Checklist** | **Confirmed** |
| MLS 4492 Hematology and Urinalysis Practicum | 2 | Minimum 36 cr. General Education Objectives (15 cr. AAS) |  |
| MLS 4493 Transfusion Blood Bank Practicum | 1 | Minimum 15 cr. Upper Division in Major (0 cr. Associate) |  |  |
| MLS 4494 Chemistry and Automation Practicum | 1 | Minimum 36 cr. Upper Division Overall (0 cr. Associate) |  |  |
|  |  | Minimum of 120 cr. Total (60 cr. Associate) |  |  |
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| **Advising Notes** | ***MAP Completion Status (for internal use only)*** |
| **MLS 4490 – 1 credit is required for the BS in MLS but 6 credits are** **required to be eligible for the Board of Certification.** |  | *Date* |
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| MATH 1153 Statistics is highly recommended | *CAA or COT:* | 3.2.2020jh |
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|  | **Complete College American Momentum Year****Math and English course in first year-Specific GE MATH course identified****9 credits in the Major area in first year****15 credits each semester (or 30 in academic year)****Milestone courses** |
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|  |  Form Revised 9.10.2019 |

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