

CLINICAL LABORATORY SCIENCES
The University of Kansas Medical Center
School of Health Professions
Bachelor of Science Degree Requirements



Molecular Biotechnology Concentration

Students are required to complete a minimum of 57 pre-requisite Credit Hours. The following **suggested study plan** may be helpful in planning course work. Courses with similar content may be acceptable alternatives. Courses meeting specific KU Core goals are in brackets.

Freshman-Sophomore Preparation

| First Semester (14-15 Credit Hours) | Second Semester (15 Credit Hours) |
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| ENGL 101 Composition (3) [G 2.1] CHEM 130 General Chemistry I (5) [G 1.2] MATH 101 Algebra or MATH 115 Calculus or MATH 104 Precalculus (3) [G 1.2] Social Science Elective (3) [G 3S] CLS 210 Intro to Clinical Laboratory Science (1) [elective] (Can be taken once during any of the first 4 semesters) | ENGL 102 Composition and Literature (3)) OR BUS 105 Business Writing [G 2.1] BIOL 150 Principles of Molecular and Cellular Biology (4) CHEM 135 General Chemistry II (5) US Culture & Diversity Elective (3) [G 4.1] |
| Third Semester (16 Credit Hours) | Fourth Semester (13-14 Credit Hours) |
| CHEM 331 Organic Chem I Lab and 310 Fund. of Organic Chem OR 330 Organic Chem I (5) BIOL 570 Intro to Biostatistics OR MATH 365 Elementary Statistics OR SOC 210 Intro to Social Research OR PSYC 210 (3) Statistics for Psychological Research BIOL 400/402 Fundamentals of Microbiology & Laboratory (5) Humanities Elective (3) [G 3H] | BIOL 350 Intro to Genetics (4) COMS 130 OR 131 Speaker-Audience Communication OR JOUR 150 Stand and Deliver (3) [G 2.2] BIOL 246 Principles of Human Physiology OR BIOL 408 Physiology of Organisms (3) OR BIOL 646 Mammalian Physiology (4) Global Diversity Elective (3) [G 4.2] |

Molecular Biotech Concentration Professional Program

| Fifth Semester (16 Credit Hours) | Sixth Semester (16 Credit Hours) |
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| BIOL 600 or CLS 600 Introductory Biochemistry (4)* CLS 523 Fundamentals of Analytical Techniques & Immunochemistry Lec/Lab (3) [G 1.1] CLS 536 Hematology I (3) CLS 537 Hematology I Laboratory (2) BIOL 503 Immunology (3) OR CLS 538 Immunology* CLS 520 Phlebotomy (1) [G 5] | CLS 532 Clinical Microbiology I (3) CLS 533 Clinical Microbiology I Laboratory (3) CLS 546 Hematology II (3) CLS 547 Hematology II Laboratory (2) CLS 530 Clinical Chemistry I (3) CLS 549 Clinical Immunology I Laboratory (2) |

Summer Session (2 Credit Hour)

CLS 605 Introduction to Molecular Diagnostics I (1)
 CLS 607 Introduction to Molecular Diagnostics I Lab (1)

| Seventh Semester (16 Credit Hours) | Eighth Semester (22 Credit Hours) |
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| CLS 540 Clinical Chemistry II (2) CLS 541 Professional Development (2) [G 5] CLS 542 Clinical Microbiology II (2) CLS 543 Clinical Microbiology II Laboratory (2) CLS 544 Immunohematology I (3) CLS 545 Immunohematology I Laboratory (2) CLS 661 Management Principles in Health Care (3) [G 5] | CLS 610: Adv. Biotechniques (3) CLS 611: Adv. Biotechniques Lab (2) CLS 615: Journal Club (1) CLS 620: Radiation Safety (1) CLS 621: Biotechnology Methodologies Practicum (4) CLS 622: Problems in Molecular Genetics, Proteomics & Molecular Immunology (2) One Elective Practicum combination (4 hrs) to be selected from: Cytogenetics, Protein Structure/Function, Cytokine/Chemokine Biology, Molecular Immunology CLS 623: Molecular Genetics Practicum (4) [G 6] CLS 655: Molecular Biotechnology Review (1) |

* CLS 538 and CLS 600 are only available to students enrolled in the CLS professional program. BIOL 503 and/or BIOL 600 may be taken prior to enrollment in the CLS program. Students need only take one Immunology and one Biochemistry course. Those considering additional education (medical school, graduate school) should speak with an advisor regarding which Immunology and Biochemistry courses would be best for their specific career goals.