

B.S. Molecular, Cellular, and Developmental Biology

Use this check sheet with your Degree Progress Report (DPR)

KU CORE REQUIREMENTS See <https://kucore.ku.edu/fulfilling-the-core> for approved KU Core courses and/or experiences

Goal 1. Critical Thinking and Quantitative Literacy

Outcome 1 (Can be satisfied by degree reqs.)

Outcome 2 (Can be satisfied by degree reqs.)

Goal 2. Communication

Outcome 1

Outcome 2

Goal 3. Breadth of Knowledge

Arts & Humanities

Social Sciences

Natural Sciences (Can be satisfied by degree reqs.)

Goal 4. Culture and Diversity

Outcome 1

Outcome 2

Goal 5. Social Responsibility and Ethics

Goal 6. Integration and Creativity

(Can be satisfied by degree reqs.)

GENERAL SCIENCE REQUIREMENTS (34-38 h)

BIOL 105 Biology Orientation Seminar (1)	<input type="checkbox"/>	MATH 115 & 116 Calculus I & II (6) OR MATH 125 Calculus I (4)	<input type="checkbox"/> (<input type="checkbox"/>)
CHEM 130/190&191 General Chemistry I (5)	<input type="checkbox"/>	BIOL 570 Intro to Biostatistics (4) OR	<input type="checkbox"/>
CHEM 135/195&196 General Chemistry II (5)	<input type="checkbox"/>	MATH 365 Elementary Statistics (3)	
CHEM 330/380 Organic Chemistry I (3)	<input type="checkbox"/>	PHSX 114 & 115 College Physics I & II (8) OR	<input type="checkbox"/> <input type="checkbox"/>
CHEM 331 Organic Chemistry I Lab (2)	<input type="checkbox"/>	PHSX 211+216 & 212+236 General Physics I & II (9)	
CHEM 335 Organic Chemistry II (3)	<input type="checkbox"/>		

MOLECULAR CELLULAR & DEVELOPMENTAL BIOLOGY REQUIREMENTS (35 h)

BIOL 150/151 Prin. Molecular & Cell Bio (4)	<input type="checkbox"/>	BIOL 417 Biology of Development (3)	<input type="checkbox"/>
BIOL 152/153 Prin. Organismal Biology (4)	<input type="checkbox"/>	BIOL 435 Introduction to Neurobiology (3)	<input type="checkbox"/>
BIOL 350/360 Principles of Genetics (4)	<input type="checkbox"/>	BIOL 600 Introduction to Biochemistry (3)	<input type="checkbox"/>
BIOL 412 Evolutionary Biology (4)	<input type="checkbox"/>	BIOL 650 Advanced Neurobiology (3) OR	<input type="checkbox"/>
BIOL 405 Laboratory in Genetics (3) OR	<input type="checkbox"/>	BIOL 672 Gene Expression (3) OR	
BIOL 426 Laboratory in Cell Biology (3)	<input type="checkbox"/>	BIOL 688 Molecular Biology of Cancer (3)	
BIOL 416/536 Cell Structure and Function (3)	<input type="checkbox"/>	BIOL 599 Senior Seminar: MCDB (1) (must be taken Sr. year)	<input type="checkbox"/>

MOLECULAR CELLULAR & DEVELOPMENTAL BIOLOGY ELECTIVES (12 h)

Any Biology courses numbered 400 or higher, with no more than 3 h BIOL 423 Non-Lab Independent Study and/or BIOL 424 Independent Study (combined) may be used to fulfill the elective requirement.

BIOL _____ <input type="checkbox"/>	BIOL _____ <input type="checkbox"/>
BIOL _____ <input type="checkbox"/>	BIOL _____ <input type="checkbox"/>
BIOL _____ <input type="checkbox"/>	BIOL _____ <input type="checkbox"/>
BIOL _____ <input type="checkbox"/>	

- At least 120 h (of which 45 must be Jr/Sr. h – courses numbered 300 or above) must be completed for graduation. **120 h 45 Jr/Sr h**
- Completing the minimum degree requirements set forth above (not including KU Core) results in **81-85 overall h and 50-51 Jr/Sr h**. Double majors must complete ≥ 15 h in the major (i.e. not in General Education Requirements or General Science Requirements that are *unique* to that major). **81-85 h 50-51 Jr/Sr h**
- At least 47 of the total 120 hours must be considered Major Hours, 39 of which must be Jr/Sr hours **47 h 39 Jr/Sr h**
 - Math 115 or 125 can be used to fulfill Critical Thinking and Quantitative Literacy: Outcome #2
 - BIOL 150/151 or BIOL 400 Fundamentals of Microbiology can be used to fulfill Breadth of Knowledge: Natural Sciences
 - Keep in mind that if a General Science Requirement, MCDB Requirement or MCDB Elective is used to satisfy a KU Core Requirement, your total number of hours needed for graduation will still be 120 h and additional courses will be needed to reach this total.

Some suggested courses for requirements or electives for students interested in particular areas of study:

Cell Biology

- BIOL 400 Fund. Microbiology (3)
- BIOL 408 Physiology of Organisms (3)
- BIOL 419 Topics in: _____ (1-3)
- BIOL 420 Seminar: _____ (1-3)
- BIOL 423 Non-laboratory Ind. Study (1-3)
- BIOL 424 Independent Study (1-3)
- BIOL 426 Laboratory in Cell Biology (3)
- BIOL 503 Immunology (3)
- BIOL 506 Bacterial Infectious Diseases (3)
- BIOL 512 Virology (3)
- BIOL 545 Evolution of Development (5)
- BIOL 499 Intro Honors Research (2)
- BIOL 546 Mammalian Physiology (3)
- BIOL 688 Mol. Biol. of Cancer (3)
- BIOL 755 Mechanisms of Development (3)

Genetics

- BIOL 405 Genetics lab (2)
- BIOL 419 Topics in: _____ (1-3)
- BIOL 420 Seminar: _____ (1-3)
- BIOL 423 Non-laboratory Ind. Study (1-3)
- BIOL 424 Independent Study (1-3)
- BIOL 518 Microbial Genetics (3)
- BIOL 595 Human Genetics (3)
- BIOL 655 Behavioral Genetics (3)
- BIOL 672 Gene Expression (3)
- BIOL 743 Population Genetics (3)
- BIOL 747 Quantitative Genetics (3)
- BIOL 753 Advanced Genetics (3)

Neurobiology

- BIOL 419 Topics in: _____ (1-3)
- BIOL 420 Seminar: _____ (1-3)
- BIOL 423 Non-laboratory Ind. Study (1-3)
- BIOL 424 Independent Study (1-3)
- BIOL 546 Mammalian Physiology (3)
- BIOL 650 Advanced Neurobiology (3)
- BIOL 672 Gene Expression (3)