# BACHELOR OF SCIENCE OR ARTS IN BIOLOGY WITH A CELL & MOLECULAR EMPHASIS STARTING FALL 2019



## IMPORTANT INFORMATION TO REMEMBER

Use this sheet and the Master List of Biology Courses with your Degree Audit to schedule your courses in a logical and functional sequence. YOU are responsible for ensuring that <u>ALL</u> requirements are met for the major <u>AND</u> that you have fulfilled <u>ALL</u> university requirements. Pay special attention when repeating courses and class time conflicts.

Students must complete a minimum of 40 upper division hours (3000+)

Students must complete a minimum of 72 Science hours

Students must complete a minimum of 36 Biology credit hours

Students must complete 21 Biology residency hours that must be taken at the U

### **REQUIRED SCIENCE CORE COURSES**

COURSE	TITLE	CREDITS	SEMESTER
MATH 1170	CALCULUS FOR BIOLOGISTS I		
OR	OR	4	
MATH 1210	CALCULUS I		
MATH 1180	STATISTICS WITH CALCULUS FOR BIOLOGISTS		
OR	OR	4	
MATH 1220	CALCULUS II		
CHEM 1210	GENERAL CHEMISTRY I	4	
CHEM 1215	GENERAL CHEMISTRY LAB I	1	
CHEM 1220	GENERAL CHEMISTRY II	4	
CHEM 1225	GENERAL CHEMISTRY LAB II	1	
CHEM 2310	ORGANIC CHEMISTRY I	4	
PHYS 2010	GENERAL PHYSICS I	4	
PHYS 2020	GENERAL PHYSICS II	4	

### **REQUIRED FUNDAMENTAL BIOLOGY COURSES**

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COURSE	TITLE	CREDITS	SEMESTER
BIOL 1610	FUNDAMENTAL PRINCIPLES OF BIOLOGY I	4	
BIOL 1615	FUNDAMENTAL PRINCIPLES OF BIOLOGY LAB I	1	
BIOL 1620	FUNDAMENTAL PRINCIPLES OF BIOLOGY II	4	
BIOL 1625	FUNDAMENTAL PRINCIPLES OF BIOLOGY LAB II	1	

### **EMPHASIS CORE COURSES**

COURSE	TITLE	CREDITS	SEMESTER
BIOL 2020	PRINCIPLES OF CELL BIOLOGY	3	
OR	OR	OR	
BIOL 2021	PRINCIPLES OF CELL SCIENCE (HONORS)	4	
BIOL 2030	PRINCIPLES OF GENETICS	3	
BIOL 3510	BIOLOGICAL CHEMISTRY I	3	

## COMPLETE 1 EMPHASIS SPECIFIC COURSE

### COURSES CANNOT DOUBLE COUNT IN EITHER SECTION

COURSE	TITLE	CREDITS	SEMESTER
BIOL 3370	MICROBIAL BIOLOGY	3	
BIOL 3410	ECOLOGY & EVOLUTION	3	
BIOL 3520	BIOLOGICAL CHEMISTRY II	3	
BIOL 5120	GENE EXPRESSION	3	
BIOL 5210	CELL STRUCTURE AND FUNCTION	3	

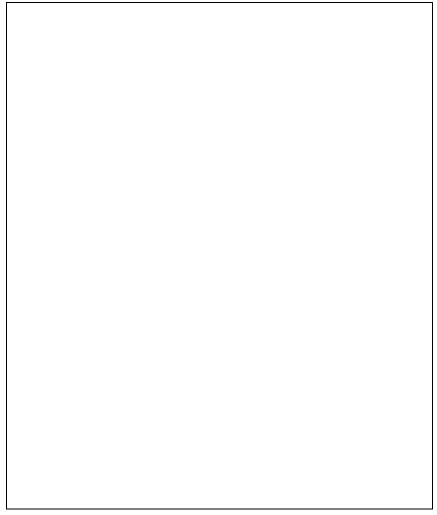
### COMPLETE 2 EMPHASIS ELECTIVE COURSES COURSES CANNOT DOUBLE COUNT IN EITHER SECTION 1 MUST BE A 5000-LEVEL COURSE

COURSE	TITLE	CREDITS	SEMESTER
BIOL 3210	GENERAL & PATHOGENIC MICROBIOLOGY	3	
BIOL 3230	DEVELOPMENTAL BIOLOGY	3	
BIOL 3240	INTRO TO CELLULAR NEUROBIOLOGY	3	
BIOL 3370	MICROBIAL BIOLOGY	3	
BIOL 3410	ECOLOGY & EVOLUTION	3	
BIOL 3520	BIOLOGICAL CHEMISTRY II	3	
BIOL 3550	PHYSICAL PRINCIPLES IN BIOLOGY	3	
BIOL 5030			
OR	BASIC IMMUNOLOGY	3	
PATH 5030			
BIOL 5120	GENE EXPRESSION	3	
BIOL 5140	GENOME BIOLOGY	3	
BIOL 5210	CELL STRUCTURE AND FUNCTION	3	
BIOL 5510	GENES, DEVELOPMENT, AND EVOLUTION	3	
CHEM 5810	NANOSCIENCE	3	

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# School of BIOLOGICAL SCIENCES COLLEGE OF SCIENCE | THE UNIVERSITY OF UTAH

# NOTES



## **COMPLETE 1 EMPHASIS ELECTIVE COURSE**

COURSE	TITLE	CREDITS	SEMESTER
BIOL 3515	BIOLOGICAL CHEMISTRY LAB	3 [L1]	
BIOL 3525	MOLECULAR BIOLOGY OF A DNA LAB	3 [L2]	
BIOL 5255	PROKARYOTIC GENETICS	3 [L2]	

## **COMPLETE 2 5000-LEVEL BIOLOGY COURSES**

COURSE	TITLE	CREDITS	SEMESTER
BIOL 5			
BIOL 5			

## COMPLETE AT LEAST 2 ADDITIONAL BIOLOGY LAB COURSES TOTALLING 3 LAB UNITS

COURSE	TITLE	LAB UNITS	SEMESTER

## OTHER BIOLOGY COURSES NEEDED FOR THE REQUIRED 36 BIOLOGY HOURS OR REQUIRED 72 SCIENCE HOURS

COURSE	TITLE	CREDITS	SEMESTER