



# DEGREE WORKSHEET FOR:

## BS Biological Sciences: Cell and Molecular Emphasis

### 2018-2019 Catalog

#### Degree Requirements – 120 credits

YEAR 1- FALL (15 credits)	YEAR 1- SPRING (16 credits)
ENG 122 College Composition (LAC Area 1a) 3 credits BIO 110 Principles of Biology (LAC Area 6) (F,S) 4 credits CHEM 111/111L Principles of Chemistry I (LAC Area 6) (F,S) 4/1 credits Liberal Arts Core <sup>1</sup> (Areas 3, 4, 5, 7, or 8) 3 credits	BIO 111 Survey of Organismal Biology (F,S) 4 credits CHEM 112/112L Principles of Chemistry II (F,S) 4/1credits SCI 291 Scientific Writing (LAC Area 1b) (F,S) 3 credits MATH 171 Calc I for Life Sci (LAC Area 2) (F.S) 4 credits
YEAR 2- FALL (16 credits)	YEAR 2-SPRING (14 credits)
BIO 210 Cell Biology (F,S) 3 credits PHYS 220 Intro Physics I <sup>2</sup> (LAC Area 6) (F) 5 credits CHEM 331/331L Organic Chemistry I (F) 4/1 credits STAT 150 Intro. to Statistical Analysis (LAC Area 2) 3 credits	BIO 220 Genetics (F,S) 4 credits PHYS 221 Intro Physics II <sup>2</sup> (S) 5 credits CHEM 332/332L Organic Chemistry II (S) 4/1credits
YEAR 3- FALL (16-18 credits)	YEAR 3- SPRING (13-17 credits)
BIO 360 Ecology (F,S,Su) or BIO 300+ Upper Division Elective in Major <sup>3</sup> 4 credits University Wide Electives 3 credits CHEM 481 General Biochemistry I <b>OR</b> CHEM 381/381L Principles of Biochemistry <sup>4</sup> (F) 3-4 credits Physiology <sup>5</sup> 3-4 credits Liberal Arts Core <sup>1</sup> (Areas 3, 4, 5, 7, or 8) 3 credits	BIO 351 Microbiology (F,S) or BIO 300+ Upper Division Elective in Major <sup>3</sup> 4 credits BIO 360 Ecology (F,S,Su) <b>OR</b> BIO 300+ Upper Division Elective in Major <sup>3</sup> 3-4 credits Physiology <sup>5</sup> 0-3 credits Liberal Arts Core <sup>1</sup> (Areas 3, 4, 5, 7, or 8) 6 credits
YEAR 4- FALL (15 credits)	YEAR 4- SPRING (14 credits)
BIO 425 Molecular Genetics (F) 3 credits BIO 351 Microbiology (F,S) <b>OR</b> BIO 300+ Upper Division Elective in Major <sup>3</sup> 4 credits BIO 465 Evolution (F,S, Su) <b>OR</b> BIO 300+ Upper Division Elective in Major <sup>3</sup> 3 credits Capstone Professional Experience <sup>6</sup> 1 credit University Electives 4 credits	BIO 450 Cell Physiology (F,S) 3 credits BIO 442 Molecular and Cellular Laboratory ( F,S) 2 credits BIO 465 Evolution (F,S, Su) <b>OR</b> BIO 300+ Upper Division Elective in Major <sup>3</sup> 3 credits BIO 300+ Upper Division Elective in Major <sup>3</sup> 3 credits Liberal Arts Core <sup>1</sup> (Areas 3, 4, 5, 7, or 8) 3 credits School of Biological Sciences Exit Exam <sup>7</sup>

(F) = offered in Fall (S) =offered in Spring (SU) = offered in summer

**Admission Requirement – No separate admission requirement.**

**Minor Required – No Minor required.**

**Notes – see page 2.**

**Contact Information – School of Biological Sciences**

Ross Hall Room 2480, (970) 351-2921

School Web Page: <http://www.unco.edu/nhs/biology>

## BS Biological Sciences – Cell and Molecular Emphasis (cont.)

This worksheet is a recommended schedule to complete your bachelor's degree in 4 years. Every UNC student must meet the following requirements in order to graduate with a bachelor's degree: earn a minimum of 120 semester credit hours; possess a minimum of a 2.00 cumulative grade point average; have at least 40 credit hours in courses designated as Liberal Arts Core and meet all degree requirements in the student's major field of study. Each major and/or emphasis may have additional requirements necessary for graduation. **Students must consult with their major advisor to receive information on any additional graduation requirements.**

### Notes

- 1 <sup>1</sup>Liberal Arts Core courses can be taken any semester. It is strongly suggested that they be evenly distributed over the entire 4 years of study rather than concentrated in the first 2 years. **NOTE: Be certain to select courses from Areas 7 and 8 that also count for Areas 3, 4 or 5.**
  - 2 <sup>2</sup>Either PHYS 220/221 or PHYS 240/241 can be taken. PHYS 240/241 can be substituted but both MATH 131 and MATH 132 are required.
  - 3 <sup>3</sup>Elective Major Courses- Must take 13 credits from BIO courses level 300 or higher.
  - 4 <sup>4</sup>If CHEM 381 is completed in lieu of CHEM 481, the number of BIO Advanced Study credits required will be reduced by 1 credit.
  - 5 <sup>5</sup>Option 1: BIO 350 Human Physiology (4 credits) **or** BIO 354 Plant Physiology (4 credits). Option 2 BIO 552 (3 credits) **and** BIO 553 (3 credits) are required. If BIO 552 and BIO 553 are completed for the Physiology requirement, the number of Elective Major credits required will be reduced by 2.
  - 6 <sup>6</sup>Capstone Professional Experience requirement can be met by completing a minimum of 1 credit hour from the following course options: BIO 422, BIO 492, 493 or BIO 494.
  - 7 <sup>7</sup>All Biology Majors must take the School of Biological Sciences Exit Exam during the last semester of Senior Year. (Excluding summer). **Make an appointment at Testing Center.**
  - 8 All Biology Majors are required to have a minimum of a 2.0 GPA in all BIO prefix courses taken to meet their major requirements.
  - 9 Students receiving "D" or "F" in BIO courses taken to meet their major requirements must repeat the courses.
  - 10 Some Upper Division Biology courses are offered every other year. Check with your advisor to find out when they are offered.
  - 11 Remember to get a graduation check in Carter Hall (Room 3002) after 90 semester hours.
  - 12 A maximum of 3 credits total of BIO 422, 492, 493, 494, 495, 585, and 592 can count toward the Biological Advanced study category.
- \* **Students who will be taking the MCAT should take both PSY 120 Principles of Psychology and SOC 100 Principles of Sociology. One of these courses can be used to fulfill the LAC 5c requirement, but the other will be considered a university elective.**
- \* **It is recommended that students who are planning to apply to medical school take CHEM 381 Principles of Biochemistry as this is now becoming a required course for many medical schools.**

### Minimum entrance requirements for University of Colorado Medical School (as of 6/18)

**Check other schools in which you are interested for their current requirements.**

- 8 semester hours – human biology (with lab)
- 8 semester hours – general chemistry (with lab)
- 8 semester hours – organic chemistry (with lab)
- 8 semester hours – general physics (with lab)
- 6 semester hours – College level mathematics (algebra and above)
- 6 semester hours – English literature/composition