

Bachelor of Science in Biological Sciences and Chemistry (Double Major)
Pre-Health and Biomedical Sciences Emphasis
Advising Sheet 2009-2010 Catalog

Last updated: July 17, 2009

| Fall Semester - Freshman Year | | | | | Spring Semester - Freshman Year | | | | | | |
|--|--|---------|------------|-------|---|----------|---|---------|------------|-------|----------------|
| Course # | Course Name | Credits | Category* | Notes | Date Completed | Course # | Course Name | Credits | Category* | Notes | Date Completed |
| BIO 110 | Principles of Biology (F,S) | 4 | LAC(sp) 6 | | | BIO 111 | Survey of Organismal Biology (F,S) | 4 | Bio Core | | |
| CHEM 111 | Principles of Chemistry I (F,S) | 5 | LAC(sp) 6 | | | CHEM 112 | Principles of Chemistry II (F,S) | 5 | Chem Core | | |
| MATH 131 | Calculus and Analytical Geometry I (F,S) | 4 | LAC(sp) 2 | | | SCI 291 | Scientific Writing (F,S) | 3 | LAC(sp) 1b | 1 | |
| ENG 122 | College Composition (F,S) | 3 | LAC(sp) 1a | 1 | | | Liberal Arts Core Areas 3, 4, 5, 7 or 8 | 3 | LAC | 1 | |
| | Total: | 16 | | | | | Total: | 15 | | | |
| Fall Semester - Sophomore Year | | | | | Spring Semester - Sophomore Year | | | | | | |
| Course # | Course Name | Credits | Category* | Notes | Date Completed | Course # | Course Name | Credits | Category* | Notes | Date Completed |
| BIO 210 | Cell Biology (F,S) | 3 | Bio Core | | | BIO 220 | Genetics (F,S) | 4 | Bio Core | | |
| CHEM 331 | Organic Chemistry I (F) | 5 | Chem Core | | | CHEM 332 | Organic Chemistry II (S) | 5 | Chem Core | | |
| | Liberal Arts Core Areas 3, 4, 5, 7 or 8 | 3 | LAC | 1 | | BIO >300 | Upper Division Elective in Biology | 3 | Elective | 4, 9 | |
| BIO 341 | Human Anatomy | 3 | Emphasis | | | BIO 350 | Human Physiology | 4 | Emphasis | | |
| | Total: | 14 | | | | | Total: | 16 | | | |
| Fall Semester - Junior Year | | | | | Spring Semester - Junior Year | | | | | | |
| Course # | Course Name | Credits | Category* | Notes | Date Completed | Course # | Course Name | Credits | Category* | Notes | Date Completed |
| BIO 360 | Ecology (F, Su) | 4 | Bio Core | | | BIO 351 | Microbiology (S) | 4 | Bio Core | | |
| STAT 150 | Statistics (F,S) | 3 | LAC(sp) 2 | | | PHYS 221 | General Physics II (S) | 5 | Sup Sci | 3 | |
| PHYS 220 | General Physics I (F) | 5 | LAC(sp) 6 | 3 | | BIO 465 | Evolution (S,Su) | 3 | Bio Core | | |
| CHEM 321 | Chemical Analysis (F) | 4 | Chem Core | | | CHEM 441 | Inorganic Chemistry I (S) | 2 | Chem Core | | |
| | Total: | 16 | | | | | Total: | 14 | | | |
| Reminder: Get a Graduation Check in Carter Hall (Room 3002) after 90 semester hours | | | | | | | | | | | |
| Fall Semester - Senior Year | | | | | Spring Semester - Senior Year | | | | | | |
| Course # | Course Name | Credits | Category* | Notes | Date Completed | Course # | Course Name | Credits | Category* | Notes | Date Completed |
| CHEM 481 | General Biochemistry I (F) | 3 | Chem Core | 4, 9 | | BIO 450 | Cell Physiology (S) | 4 | Emphasis | | |
| BIO >300 | Upper Division Elective in Biology | 4 | Elective | 4, 9 | | CHEM 450 | Survey of Physical Chemistry (S) | 4 | Chem Core | | |
| BIO >300 | Upper Division Elective in Biology | 3 | Elective | 1 | | CHEM 482 | General Biochemistry II (S) | 3 | Chem Core | | |
| | Liberal Arts Core Areas 3, 4, 5, 7 or 8 | 3 | LAC | | | CHEM 483 | Experimental Biochemistry I (S) | 1 | Chem Core | | |
| | | | | | | CHEM 484 | Experimental Biochemistry II (S) | 1 | Chem Core | | |
| | Total: | 13 | | | | | Total: | 13 | | | |
| Fall Semester - Senior + 1 Year | | | | | | | | | | | |
| Course # | Course Name | Credits | Category* | Notes | Date Completed | | | | | | |
| BIO > 300 | Upper Division Elective in Biology | 4 | Elective | 4,9 | | | | | | | |
| BIO > 300 | Upper Division Elective in Biology | 4 | Elective | 4,9 | | | | | | | |
| | Liberal Arts Core Areas 3,4,5,7 or 8 | 3 | LAC | 1 | | | | | | | |
| | Capstone Professional Experience | 1 | Elective | 4 | | | | | | | |
| | School of Biological Sciences Exit Exam | | Required | 5 | | | | | | | |
| | School of Chemistry Exit Exam | | Required | 5 | | | | | | | |
| | Total: | 12 | | | | | | | | | |

Pre-Health and Biomedical Sciences Emphasis

Program Requirements

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| Required Major Credits (Common Biology Core): | 22 |
| Required Major Credits (Emphasis): | 16 |
| Elective Major Credits (Biological Science Advanced Study): | 21 |
| Capstone Professional Experience: | 1 |
| Required Supporting Credits (Supporting Science): | 15 |
| Required Minor (none required): | 0 |
| Required Specified Liberal Arts Core Credits: | 24 |
| Required PTEP Credits: | 0 |
| Elective Liberal Arts Core Credits: | 16 |
| University-wide Elective Credits: | 5 |
| Total Credits required for this degree | 120 |

*Course Category

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|----------|---|
| Bio Core | Biology Core Course (required) |
| Emphasis | Required Major Course (emphasis) |
| Elective | Elective Major Course (Biological Science Advanced Study) |
| Sup Sci | Supporting Science or Mathematics Course (required) |
| LAC (sp) | Liberal Arts Core (required specified) |
| LAC | Liberal Arts Core |
| Uni Elec | University-wide elective course |

Notes

- 1: Liberal Arts Core courses can be taken any semester. It is strongly suggested 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: 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: Elective Major Courses - Must take at least 21 credits from BIO courses at 300 level or higher. Course credit ranges from 1-4.
- 4: Capstone Professional Experience requirement can be met by completing a minimum of 1 credit hour from the following course options:
BIO 422, BIO 492, BIO 494.
- 5: 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.
- 6: 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.
- 7: Students receiving "D" or "F" in BIO courses taken to meet their major requirements must repeat the courses or take suitable alternative courses as approved by their major advisor.
- 8: Some Upper Division Biology courses are offered every other year. Check with your advisor to find out when they are offered.
- 9: BIO 102, 103, 11, 114, 211 and 221 will count as Biological Science Advanced Study Electives required for major.

Minimum entrance requirements for University of Colorado Medical School (as of 2/06)

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

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| One year of biology (8 semester hours) One year of general chemistry (8 semester hours) One year of organic chemistry (8 semester hours) One year of physics (8 semester hours) Six credits of math (at least College Algebra & Trigonometry) Nine credits of English (at least English Composition and English Literature) |
| Other recommended courses for University of Colorado Medical School Calculus Biochemistry Statistics Ethics Computer Programming Genetics Molecular Biology |