Common Pre-requisite Courses in IQ Biology

**APPM 4/5560 - Markov Processes**
Prerequisites: APPM 3570 (Applied Probability) or equivalent

**APPM 4570/5570 – Statistical Methods**
Prerequisites: APPM 1360 or equivalent Calculus 2 course. Same as APPM 5570.
Web Link: [http://amath.colorado.edu/courses/4570](http://amath.colorado.edu/courses/4570)

**MCDB 3500 – Molecular Biology**
Prerequisites: CHEM 1133, and either MCDB 2150 or EBIO 2070. Coreq., CHEM 3311 or 3351.
Web Link: [http://dosequis.colorado.edu/Courses/MCDB3500/](http://dosequis.colorado.edu/Courses/MCDB3500/)

**CHEM 4711-3. General Biochemistry 1** (syllabus unavailable)
Description: Lect. Topics include structure, conformation, and properties of proteins, nucleic acids, carbohydrates, and membranes; enzyme mechanisms, kinetics, and regulation; intermediary metabolism; energetics and metabolic control; electron transport and oxidative phosphorylation.
Prerequisites: CHEM 3331 or 3371 (min. grade C-). Same as CHEM 5711.

**CSCI 3104 – Algorithms**
Prerequisites: Data Structures, Discrete Math, and two semesters of Calculus. We will be assuming a thorough knowledge of basic algebra, logarithms, functions, inequalities, etc., that you will have seen in calculus. You should know basic combinatorics, set theory, math induction, and graph theory. You will also be expected to have facility with a programming language such as C, C++, Python or Java. Official prereqs: CSCI 2824 and two semesters of calculus.

**CSCI 3308 – Software Engineering Methods and Tools**
Prerequisites: CSCI 2270
Web Link: [http://3308.rallyedu.net/home?offset=0](http://3308.rallyedu.net/home?offset=0)

**CHEM 1133 - General Chemistry 2**
Prerequisites: CHEM 1113/1114 or equivalent (min. grade C-). Coreq., CHEM 1134
Web Link: No website.

**PHYS 2010 – General Physics 1**
Prerequisites: ability to use high school algebra and trigonometry.
Web Link: [http://www.colorado.edu/physics/phys2010](http://www.colorado.edu/physics/phys2010)

**PHYS 2020 – General Physics 2**
Prerequisites: General Physics I, preferably PHYS2010. Basic algebra, geometry and trigonometry. College level logic, enthusiasm, and curiosity will be helpful too!
Web Link: [http://www.colorado.edu/physics/phys2020](http://www.colorado.edu/physics/phys2020)

**MATH 1300 – Analytic Geometry and Calculus 1**
Prerequisites: two years high school algebra, one year geometry, and 1/2 year trigonometry or MATH 1150
Web Link: [http://www.colorado.edu/math/courses/calculus/math1300.html](http://www.colorado.edu/math/courses/calculus/math1300.html)

**CHEM 3311 – Organic Chemistry 1**
Prerequisites: CHEM 1133/1134 (formerly CHEM 1131), 1271, or 1371 (min. grade C-) or equivalent; for engineering students only: CHEN 1211 (min. grade C-) or equivalent; coreq., CHEM 3321 or 3361.
Web Link: [http://orgchem.colorado.edu/](http://orgchem.colorado.edu/) and [http://walba.colorado.edu/3311.html](http://walba.colorado.edu/3311.html)

*Last updated 12 January 2012*