1. BIOLOGY (39 hours)

   A. Core Requirements (these provide 26 hours of the total of 39 hours required for the major):
      BIOL 1403* Biology I (Fall)
      BIOL 1404* Biology II (pre-req: BIOL 1403) (Spring)
      BIOL 2120 Introductory Cell and Molecular Biology (Fall)
      BIOL 3416* Genetics (pre-req: BIOL 1403) (Fall & Spring)
      BIOL 3302 Developmental Biology (pre-req: BIOL 3416) (Spring)
      BIOL 3320 Cell Biology (pre-req: BIOL 3416) (Fall & Spring)
      BIOL 4320* Molecular Biology (pre-req: BIOL 3320) (Spring)
      MBIO 3401 Principles of Microbiology (pre-req BIOL 1403 & 1404 plus CHEM 3305) (Spring, Fall, & Summer)

   B. One of the following courses is required.
      BIOL 3310 Experimental Cell Biology (pre-req or co-req BIOL 3320) C&MB majors only
      BIOL 3120 Cell Biology Lab (pre-req or co-req BIOL 3320) (Fall, Spring, Summer)

   C. Three of the following courses are required (at least one must be a laboratory course)
      BIOL 4300 Undergraduate Research in Biology (Instructor permission) (Fall, Spring, Summer)
      BOT 3401* Plant Physiology (BIOL 1403 & 1404 plus CHEM 3305)
      MBIO 4303* Physiology of Bacteria (pre-req MBIO 3401) (Spring)
      MBIO 4310 Introduction to Virology (pre-req MBIO 3401) (Fall)
      MBIO 4404 Pathogenic Microbiology (pre-req MBIO 3401) (Spring)
      MBIO 4406 Genetics of Microorganisms (pre-req MBIO 3401) (Fall)
      ZOOL 3401 Animal Histology (pre-req BIOL 1403 & 1404 plus CHEM 1307) (Fall)
      ZOOL 4304 General Endocrinology (pre-req BIOL 3320 plus CHEM 3305) (Spring)
      ZOOL 4409* Comparative Animal Physiology (BIOL 1403 & 1404 plus CHEM 1307) (Spring)

   D. Additional 3000–4000 level courses as needed to meet the 39-hour requirement. Only two semesters of
      BIOL 4300 can be used to satisfy the 39 hours for the C&M Biology major – one from Group C and one as an
      elective for group D)

* designates Writing Intensive -- at least 6 hours must be taken in the major at TTU

ADJUNCT REQUIREMENTS (Courses required for the C&M Biology degree, but taught in other departments)

2. CHEMISTRY (Required as a Minor for all C&MB majors – 22 hours)
   CHEM 1307 Principles of Chemistry I
   CHEM 1107 Principles of Chemistry Lab I
   CHEM 1308 Principles of Chemistry II
   CHEM 1108 Principles of Chemistry Lab II
   CHEM 3305 Organic Chemistry I
   CHEM 3105 Organic Chemistry Lab I
   CHEM 3306 Organic Chemistry II
   CHEM 3106 Organic Chemistry Lab II
   CHEM 3311 Biological Chemistry I
   CHEM 3312 Biological Chemistry II  \]

3. PHYSICS (8 hours)
   PHYS 1403 General Physics I
   PHYS 1404 General Physics II

4. MATHEMATICS (3 hours)
   MATH 1351 There is a 6-hour general degree requirement in mathematics and logical reasoning. Cell and Molecular
   Biology majors are required to take one semester of calculus, and a second semester is strongly recommended.

NOTE: All grades in the major, minor, and adjunct requirements must be a “C” or higher.