MICROBIOLOGY MAJOR CHECKLIST – 2010-2012 Undergraduate Catalog

1. BIOLOGY (39 hours)

A. Core Requirements (these provide 20 hours of the total of 39 hours required for the major):
   - BIOL 1403* Biology I (Fall only)
   - BIOL 1404* Biology II (Spring only)
   - BIOL 4101* Seminar (Fall & Spring) - may be repeated once for credit
   - BIOL 3416* Genetics (Fall & Spring) or MBIO 4406 Genetics of Microorganisms (Fall only)
   - BIOL 4305* Organic Evolution (Fall & Spring)
   - MBIO 3401 Principles of Microbiology (Fall, Spring, & Summer)

B. At Least Five of the Following Courses (these provide 17-25 hours of the total 39 hours required for the major)
   - BIOL 3320 Cell Biology (Fall & Spring)
   - MBIO 4303* Physiology of Bacteria (Spring)
   - MBIO 4310 Introduction to Virology (Fall)
   - MBIO 4401 Microbial Ecology (Spring in Odd Years)
   - MBIO 4402 Immunology and Serology (Fall)
   - MBIO 4404 Pathogenic Microbiology (Spring)
   - MBIO 4406 Genetics of Microorganisms (Fall)

C. Other 3000-4000 Level Courses in Biology & Microbiology if needed to bring the total to 39 hours, which may include the following recommended electives:
   - BIOL 4300 Undergraduate Research in Biology (Fall, Spring, Summer I and II)
   - BIOL 4301 plus BIOL 4110 Fungal Biology – must register for both special topics numbers together
   - FDSC 3301 Food Microbiology

* designates Writing Intensive -- at least 6 hours must be taken in the major at TTU -- cannot be transferred.

No more than 6 hours of undergraduate research credit may be counted toward any major in the department.

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

2. CHEMISTRY (22 hours) Satisfies the Requirements for a Minor in Chemistry
   - 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 (taught only in Fall)
   - CHEM 3312 Biological Chemistry II (taught only in the Spring) Or CHEM 3310

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

4. MATHEMATICS (3 hours) Choose one of the following:
   - MATH 1351 Calculus I
   - MATH 2300 Statistical Methods
   - AAEC 3401 Agricultural Statistics

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