Four hours of lecture/lab per week. The course meets Area V requirements for the A.A./A.A.S./A.S. general education requirements. It is designed to give the student an understanding of the unifying principals governing life. The course is appropriate for nonscience majors and it is a recommended prerequisite for BSC 2010C, BSC 2085C, and MCB 2010C. Students already with credit for BSC 2010C, BSC 2085C, or MCB 2010C cannot subsequently receive credit for this course. Course topics include chemistry of living organisms, cell structure and function, energy and its transformations, cell division process, genetics and review of current biology research.

After completion of this course a student should be able to:

1. List the hierarchy of organization in the living world.
2. Identify the 3 fundamental components of an atom
3. Describe the various types of chemical bonds.
4. Identify the 4 major classes of macromolecules.
5. List the monomeric forms for each of the categories of macromolecules.
6. Describe the types of reactions employed in manufacturing macromolecules.
7. Identify the structures found in all cell types.
8. Describe the chemical transformations that occur in the production of ATP from glucose in living organisms.
9. Describe the process of DNA replication.
10. Describe the process of RNA transcription.
11. Describe the process of protein translation.
12. Define the terms haploid, diploid, gene, allele, chromosome, and genome.
13. Perform a punnett square analysis.
14. Describe the transfer of plasmids between bacteria.
15. List 3 methods for DNA analysis.
16. Demonstrate appropriate use of a microscope.
17. Demonstrate capacity to handle materials in an aseptic manner.
18. Identify the 4 main phases of mitosis.
19. Describe the process of meiosis.
20. Perform macromolecule analyses.
21. Interpret publications pertaining to new biological research.