

Course Objective	A	B	C	D	F
General Expectations	“A” students should be able to apply critical and integrated science thinking skills.	“B” students can interpret facts, understand information, and communicate concepts effectively.	“C” students have mastered the subject matter by recalling and memorizing the information presented.	“D” students can identify the concepts and understand the basics of biology.	“F” students can list some of the basics of biology.
The Scientific Method	Students can design experiments, complete with appropriate controls, to test hypotheses. They can also analyze their data to determine support or rejection of their hypotheses. Students will also be able to use scientific data to predict outcomes of future experiments, while recognizing the limits and subjectivity of those predictions. Students can also use scientific writing to effectively communicate their experimental designs and conclusions.	Students form testable hypotheses based on observations and can distinguish between variables and controls in designing an experiment. Students can analyze their data, draw conclusions in support or rejection of their hypotheses, and predict outcomes in new situations. Students can compose a scientific document examining their experimental designs and conclusions.	Students can create hypotheses based on observations and can apply the steps of the scientific method in order to test the hypothesis. Students understand the difference between experimental variables and controls and can identify trends and patterns in their data. Students can also explain and illustrate their experiments and conclusions in written form.	Students can identify appropriate researchable questions when given an observation. From those questions, students can frame testable hypotheses and follow the scientific method to collect data. Students can list the steps of their experimental design in written form and use their data to show support or rejection of their hypotheses.	Students can list the steps of the scientific method, but may not be able to use the scientific method to frame testable hypotheses or design appropriate experiments to test those hypotheses. Students can gather data, but have difficulty examining the data to draw scientific conclusions. Students can outline their experiments, but have difficulty communicating their findings in written form.
Biology of the Cell	Students can integrate information regarding specific cellular processes (i.e. cellular organization, membrane transport, cell signaling, cellular energy requirements and utilization, cell reproduction) and use that information to predict future behaviors, interactions, and cellular responses.	Students can compare and contrast cellular processes and discuss similarities and differences between cell types. Students can analyze that information to make predictions about cell behaviors in new contexts.	Students can model different cell types and processes. Students can recall and order major events within specific cellular processes.	Students can distinguish the relationship between structure, function and organization within different cell types.	Students can define cellular processes, but may not understand the unity and organization inherent in multi-step systems. Additionally, students can recognize cellular components, but may not understand the interactions of the components required to carry out cellular processes and responses.
Genetics and Molecular Biology	Students can integrate information pertaining to genetics and molecular biology (replication, transcription, translation, inheritance) and critically apply that information to real world situations such as disease states, forensic science, and genetic engineering.	Students can compare and contrast processes within genetics and molecular biology. Students can also discuss how genetics and molecular biology impacts real world situations such as disease states, forensic science and genetic engineering.	Students can outline processes within genetics and molecular biology and how these processes affect real world situations.	Students recognize patterns common to different processes within genetics and molecular biology and can make basic connections between these processes and real world situations.	Students can define processes and components associated with genetics and molecular biology, but may not recognize the connections and controls that exist between the processes.

