## Biology Curriculum Map

|                                    | BIOL 110:<br>Fundamentals<br>of Biology I | BIOL<br>112:Fundamentals<br>of Biology II | BIOL<br>221:<br>General<br>Ecology | BIOL<br>331:<br>Genetics | BIOL 356:<br>Evolution | Biology<br>406: Cell &<br>Molecular<br>Biology |
|------------------------------------|---|---|------------------------------------|--------------------------|------------------------|--|
| 1.1. Molecular and<br>Cell Biology | Ι   | С   |                                    | С                        | С                      | С  |
| 1.2. Organismal<br>Biology         | Ι   | С   | С                                  | C                        | С                      | С  |
| 1.3. Evolutionary<br>Biology       | Ι   | С   | C                                  | C                        | C                      |  |
| 1.4. Ecology                       |   |   | Ι                                  |                          | С                      |  |
| 2. Language &<br>Communication     | Ι   | С   | С                                  | C                        | С                      | С  |
| 3. Experimentation                 | Ι   | С   |                                    | С                        | С                      | С  |

## Program Goals

Graduating Biology majors will have:

1. Knowledge of biology and the ability to apply that knowledge in a problem-solving environment.

2. Basic laboratory skills common to biology and chemistry, such as PCR microscopy, spectrophotometry, gel electrophoresis, and volumetric and gravimetric methodologies.

3. Ability to communicate scientific information clearly and precisely, in both oral and written forms.

4. Opportunity to conduct research projects, either as part of an upper level course as a participant in an active laboratory research projects within the College, or as part of an appropriate cooperative education assignment outside the College.

5. Understanding of the principles of experimental design and data analysis and be able to formulate and carry out strategies for solving scientific problems.

6. Opportunity to take field courses which provide a direct exposure to natural biological systems.

## Learning Outcomes

1. Demonstrate an in-depth knowledge of biological concepts including:

- 1.1. Molecular and Cell Biology
- 1.2. Organismal Biology
- 1.3. Evolutionary Biology
- 1.4. Ecology

2. Interpret scientific language, identify relevant evidence, integrate knowledge from different sources and make reasonable inferences from it. Construct well designed and well written documents (lab reports, research papers) and effective and interesting oral presentations.

3. Utilize the process of scientific inquiry to design experiments, gather and interpret data.