## Biology Curriculum, Outcomes and Assessment Diagram

| Institutional Learning<br>Outcome  | Department Learning<br>Outcomes  | Program Learning<br>Outcomes   | Introduced                 | Reinforced                                     | Mastery   | Measure  |
|--|--|--|----------------------------|--|---|--|
| Learning: Informed by<br>our Christian Faith:<br>Members of the PLNU<br>community will display<br>openness to and<br>mastery of<br>foundational<br>knowledge and<br>perspectives; think<br>critically, analytically,<br>and creatively; and<br>communicate<br>effectively. | Students will demonstrate<br>an understanding of the<br>process of science, and<br>of the concepts and<br>theories of biology across<br>a broad range of<br>organizational levels:<br>molecular, cellular,<br>organismal, and<br>ecological.<br>(Learning/Teach) | Students will demonstrate<br>an understanding of the<br>process of science, and of<br>the concepts and theories<br>of biology across a broad<br>range of organizational<br>levels: molecular, cellular,<br>organismal, and<br>ecological.  | BIO210<br>BIO211<br>BIO212 | BIO345<br>BIO380<br>BIO310<br>BIO420<br>BIO360 | Electives:<br>Students take<br>three to four of<br>these courses:<br>BIO315, 320,<br>325, 330, 340,<br>350, 370, 390,<br>400, 410, 430,<br>450, 470 | Students will take the ETS<br>Major Fields Test in Biology<br>as part of the capstone<br>course in biology, BIO 497.<br>The overall group mean on<br>the ETS exam will be ≥75th<br>percentile and at least 50%<br>of our students will have an<br>overall score ≥ 60th<br>percentile. Additionally, the<br>same criteria established<br>for the overall ETS score<br>will be applied to each of<br>the 4 sub-disciplines, which<br>are Cell, Genetic &<br>Molecular, Organismal, and<br>Population, Ecological, &<br>Evolutionary Biology.<br>(Every year)   |
| Growing: In a Christian<br>Faith Community:<br>Members of the PLNU<br>community will<br>demonstrate God-<br>inspired development<br>and understanding self<br>and others and live<br>hospitably within<br>complex professional,<br>environmental and<br>social contexts.   | Students will develop<br>career goals and define a<br>path by which to achieve<br>these goals. Students<br>will develop a rationally<br>defensible integration of<br>science and faith.<br>(Growing/Shape)   | Students will participate in<br>the life of the department<br>in Biology/Chemistry clubs<br>or in various positions of<br>responsibility such as<br>graders, tutors, and<br>teaching assistants.<br>Students will develop<br>career goals and define a<br>path by which to achieve<br>these goals. | senior years.              | the sophomore,<br>a faculty advising<br>ation. |   | Student participation in<br>Biology/Chemistry clubs<br>and in positions of<br>responsibility will be tracked<br>and recorded. At least 80%<br>of our students will<br>participate in one of these<br>positions during their time<br>at PLNU.<br>(Every year)<br>In order to be cleared for<br>course registration each<br>semester, students will<br>answer a questionnaire<br>regarding their career goals<br>and their plan by which to<br>achieve those goals and<br>then discuss the<br>questionnaire with their<br>faculty advisor.<br>(Every semester) |

|  |  | Students will develop a rationally defensible integration of science and faith.                        | BIO210<br>BIO211   | BIO345<br>BIO360 | BIO497   | During their senior year,<br>students will defend the<br>integration of their faith with<br>various scientific topics via<br>written and oral<br>presentations.<br>(Every year) |
|--|--|--|--|------------------|--|---|
| Serving: In a Context<br>of Christian Faith:<br>Members of the PLNU<br>community will engage<br>in actions that reflect<br>Christian discipleship<br>in a context of<br>communal service and<br>collective<br>responsibility, serve<br>both locally and<br>globally in a vocational<br>and social setting. | Students will gain entry to<br>professional or graduate<br>schools, or to science-<br>related careers.<br>(Serving/Send) | Students will gain entry to<br>professional or graduate<br>schools, or to science-<br>related careers. | Preparation for future careers occurs<br>throughout the curriculum in every class. |                  | After graduation, alumni will<br>be tracked and data<br>regarding their<br>postgraduate education and<br>profession will be recorded.<br>Success rates for alumni<br>who apply for graduate or<br>professional schools will be<br>> 75% and the percentage<br>of graduates who obtain<br>jobs in science-related<br>occupations will be >70%.<br>(Every 5 years) |   |