

**University of Louisiana Monroe**

**QEP Annual Impact Report**

**Summer 2019**

**Section 1: A succinct list of the initial goals and intended outcomes of the Quality Enhancement Plan**

*FOCUS on Biology*, the Quality Enhancement Plan (QEP) of the University of Louisiana Monroe (ULM), seeks to increase student success in two introductory science courses through instructional enhancement. Sixty-one percent of incoming students to ULM will take either Fundamentals of Anatomy and Physiology I (BIOL 1014) or Principles of Biology (BIOL 1020). FOCUS will be integrated into all sections of these courses. The primary goal of ULM’s QEP is to improve performance and success of STEM and pre-health sciences freshmen students in these two gateway biology courses. The QEP will use high-impact practices to implement an innovative strategy focused on improving student learning by enhancing critical thinking.

**Initial Overarching QEP Goal**: To improve academic performance in the two gateway science courses that all STEM and pre-health sciences majors must take BIOL 1014 and BIOL 1020. This will be monitored by student success rates in the two courses as well as success in subsequent science courses.

**Initial Learning Outcome 1**: To improve critical thinking skills as defined by the Critical Thinking Assessment Test (CAT) developed at Tennessee Tech.

**Initial Learning Outcome 2**: To develop discipline-specific knowledge aligned with a locally developed pneumonic: **F**ormulate, **O**bserve, **C**ommunicate, **U**se, and **S**ynthesize.

**Section 2: A discussion of changes made to the QEP and the reasons for making those changes**

To this point, implementation of the QEP has proceeded as planned with minimal changes to the original proposed plan.

**Administration of the CAT test**: The QEP states, “The CAT will be administered during the final FOCUS session to a statistically significant number of students selected at random from each course section. The students who do not participate in the CAT test will be given a locally developed computerized critical thinking test.” Since FOCUS sessions will not be implemented until the Spring of 2020, the CAT test will be administered during one regularly scheduled class period during Fall 2019 for all sections of the two courses. All students will take the CAT test during Fall 2019. A locally developed computerized critical thinking test has not yet been compiled as the QEP coordinator was unable to attend the Spring CAT Test training because it fell during the same time as the SACSCOC visit. The CAT training will take place in the fall and the locally developed critical thinking test will be compiled and piloted subsequent to that.

**Implementation Committee Change**: Dr. Allison Wiedemeier was added to the implementation committee. Dr. Wiedemeier will be teaching BIOL 1020 during the Fall 2019 semester for the first time in several years.

**Diagnostic Questions**: Beginning in Fall 2019, the diagnostic questions will be slightly different from the questions that were embedded on final exams during Spring 2019. The implementation committee has identified and eliminated two questions that do not fit with the objectives for the course, corrected a question that was printed with two correct answers, and clarified the correct answer for one question.

**Section 3: QEP impact on the environment and student learning**

The university community has been very receptive and supportive of the QEP. The biology faculty have been engaged in activities to promote active learning and cooperative with initiatives necessary for the QEP. Outside of Biology, other departments have been willing to collaborate on ideas for active learning, critical thinking, and engaged classrooms.

**Achievement of identified goals and outcomes**: To date, FOCUS sessions have not been implemented in the courses. Baseline data collected for the Spring 2019 semester will provide a measure of impact on student learning in the future.

* **Overarching goa**l: A preliminary report on A,B,C and D,F,I,W rates in the two courses showed that from 2012 to 2018 about 59% of students on average passed BIOL 1014 and about 72% of students on average passed BIOL 1020. For the Spring 2019 semester, the data showed that 51% received an A, B, or C in BIOL 1014 and 78% received an A, B, or C in BIOL 1020.
* **Learning Outcome 1**: The CAT test will be given for the first time during Fall 2019.
* **Learning Outcome 2**: For the two sections of BIOL 1020 in Spring 2019, 14% of students answered 75% of the questions correctly. For the two sections of BIOL 1014 in Spring 2019, 2% of students answered 75% of the questions correctly.
* **Pilots**: During Summer 2019, four activities proposed for FOCUS sessions were piloted in the classroom with students. In BIOL 1020, students participated in a case study on the topic of photosynthesis as well as a game of Jeopardy on the topic of genetic material. In BIOL 1014, students participated in a classroom thermometer activity on membrane potentials and a team-based lottery ticket test on the autonomic nervous system. All students in both classes expressed satisfaction with the activities and felt as though the activities enhanced their understanding of the material.

**Unanticipated outcomes**: The BIOL 1020 instructors have agreed upon a content inventory to bring consistency to the course across instructors.

**Section 4: A reflection on what the institution has learned as a result of the QEP experience**

While it is still early in the process, the ULM community has already learned much about the benefits of active learning and how to increase critical thinking for students. Several biology faculty members have attended a Yale Summer Institute conference on scientific teaching and are working to share this information across the campus to other faculty and departments. The baseline data from Spring 2019 show that there is room to grow with our learning outcomes and goal, and the implementation team is looking forward to monitoring progress moving into this academic year with the implementation of the CAT test as well as FOCUS sessions in the Spring in BIOL 1020. The QEP Coordinator and the Director of the School of Sciences will present a summary and update on the QEP along with a discussion on active learning strategies to university faculty and staff during University Week Fall 2019.