

Implementation of an Undergraduate Integrated Biology and Chemistry Course

Authors : Jayson G. Balansag

Abstract : An integrated biology and chemistry (iBC) course for freshmen college students was developed in University of Delaware. This course will prepare students to (1) become interdisciplinary thinkers in the field of biology and (2) collaboratively work with others from multiple disciplines in the future. This paper documents and describes the implementation of the course. The information gathered from reading literature, classroom observations, and interviews were used to carry out the purpose of this paper. The major goal of the iBC course is to align the concepts between Biology and Chemistry, so that students can draw science concepts from both disciplines which they can apply in their interdisciplinary researches. This course is offered every fall and spring semesters of each school year. Students enrolled in Biology are also enrolled in Chemistry during the same semester. The iBC is composed of lectures, laboratories, studio sessions, and workshops and is taught by the faculty from the biology and chemistry departments. In addition, the preceptors, graduate teaching assistants, and studio fellows facilitate the laboratory and studio sessions. These roles are interdependent with each other. The iBC can be used as a model for higher education institutions who wish to implement an integrated biology course.

Keywords : integrated biology and chemistry, integration, interdisciplinary research, new biology, undergraduate science education

Conference Title : ICESIP 2017 : International Conference on Innovative Educational Science and Pedagogy

Conference Location : Bangkok, Thailand

Conference Dates : August 30-31, 2017