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| **PROGRAM INSTRUCTIONAL PLAN** |

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| PROGRAM: BIOLOGY | | DATE: 09/08/2017 |
| COURSES OFFERED THIS SEMESTER: BIOL 1108 | | # FACULTY |
| CAMPUS (ES): all campuses | FACILITIES NEEDED | |
| ADDITIONAL NECESSARY MATERIALS | | |
| SUPPLEMENTAL INSTRUCTIONAL ACTIVITIES  The Biology Program in consultation with the faculty in the department recommends the following supplemental instructional activities to be used to make up the time lost during the college closure:   * Assigned Video lectures/Open educational resources (OER) including vetted YouTube videos, Eric Simon Pearson videos etc., available on the mastering Biology site * Movie/Ted talk/PBS screening * Lab reports related to course content * Attend Stem event (symposium/lecture) * Tutoring (documented by tutoring center)   Instructors will assign activities that align with the SLOs adopted by the program for each course.  The Biology Program suggests that instructors choose ONE of the supplemental instructional activities. However, instructors may choose to assign several of these activities as they see fit for their classes. | | |
| NECESSARY PROFESSIONAL DEVELOPMENT | | |
| INSTRUCTIONAL CONTENT (List Program Student Learning Outcomes and how each will be addressed within the courses offered this semester.)  Program Student Learning Outcomes (PSLOs) for the Biology Discipline   1. Will display an understanding of biological systems and evolutionary processes spanning all ranges of biological complexity, including atoms, molecules, genes, cells, and organisms. 2. Will integrate factual and conceptual information into an understanding of scientific data by written, oral and/or visual communication. (This may include successful completion of a course-specific research project or a case study module). 3. Will demonstrate proficiency and safe practices in the use of laboratory equipment and basic laboratory techniques. 4. Will apply principles of the scientific method to problems in biology in the collection, recording, quantitative measurement, analysis and reporting of scientific data.   Course Student Learning Outcomes:   1. Student will be able to understand the components of the scientific method and its application in designing of experiments and interpretation of experimental data. 2. Student will be able to understand the metric units of measurement and learn to use them in the lab experiments. 3. Student will be able to describe the parts of a microscope and use it to describe the structure and functions of a cell and its sub-cellular structures. 4. Student will be able to understand the structure and function of macromolecules such as carbohydrates, lipids, proteins and nucleic acids. Be able to describe and analyze the results of macromolecules testing in samples. 5. Student will be able to describe and analyze the results of the experiments performed to understand metabolic processes such as enzymatic reactions, cellular respiration and photosynthesis. 6. Student will be able to describe cell division, DNA replication and protein synthesis. 7. Student will be able to understand the principles of genetics and solve genetic problems. | | |
| EVALUATION PROCEDURES (How will we know this has worked?)  The biology Program administers a comprehensive departmental final exam every semester for each of the courses offered in the program. The scsntron answer sheets will be collected and analyzed by the faculty. Each subcommittee will review the obtained data and discuss the results. The discussion may include comparison of the obtained data with data from past semesters. | | |
| COMMUNICATION PLAN (How will you inform all faculty, especially the program adjunct faculty, of the Program Instructional Plan?)  Faculty and adjuncts had been already informed of the ongoing process via e-mails, and were involved in the discussion to develop the Supplemental Instructional Plan. Upon approval, the plan will be shared with all faculty and adjuncts via e-mail, and will be made available on the program web page as well. | | |

Program Coordinator Signature \_\_\_ Manhal Chbat \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: 9/8/2017

Department Chair Signature \_\_\_\_\_\_Tom Loesch \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: 9/8/2017

Dean Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Jerome Drain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: 9/8/2017