**Assessment Plan**

**for Workforce and FOS Programs**

**Program/Track Name: \_Biomedical Equipment Technology (AAS Degree)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Description of Program-Level Learning Outcomes**

Please indicate the Program Learning Outcomes for the degree, degree track, or certificate below:

|  |  |
| --- | --- |
| Program-Level Learning Outcomes | |
| Program Learning Outcome 1: | Students will be able to demonstrate the safe/appropriate use of troubleshooting skills in electronics and networking to test, analyze and maintain biomedical equipment in proper working order. |
| Program Learning Outcome 2: | Students will be able to do performance verification of biomedical equipment to ensure accurate measurements and compliance with regulatory standards. |
| Program Learning Outcome 3: | Students will be able to safely perform preventive maintenance and general repairs on biomedical equipment. |
| Program Learning Outcome 4: | Students will be able to document accurately the records of maintenance, repair, and performance verification of biomedical equipment in a Computerized Maintenance Management System (CMMS) using proper terminology. |

**Section I: Technical Courses**

For **all technical courses** in the program, indicate in the table on the following page whether and/or how the course will support the program learning outcomes. You should include courses outside your discipline area and work collaboratively with those disciplines to determine whether and/or how those course(s) will support the program learning outcomes. **Please note** that it is understandable if courses from outside the discipline do not assess the program-level learning outcomes and serve only to introduce, practice and/or emphasize the program outcomes. It is also possible that technical courses outside of your discipline may not directly support the specific program-level learning outcomes you have identified.

***How to complete the program map:***

For each technical course in your program, please indicate whether any program-level learning outcome is introduced to students (I), practiced by students (P), emphasized for students (E), or formally assessed (A).

For example, if course WXYZ 1234 introduces students to one of the program outcomes, then enter “I” for that specific program outcome in the appropriate column. Please note that a course can be “I”, “P”, “E” and/or “A” in any program outcome. The labels in the following table apply SOLELY to the program level learning outcomes defined above. (It is NOT necessary for every course to address a program level learning outcome, and it is NOT necessary that Assessment or program level learning outcomes occur in every course.)

**Program Map ▼**

I=Introduced P=Practiced E=Emphasized A=Assessed

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Program Courses | Program Learning Outcome 1 | Program Learning Outcome 2 | Program Learning Outcome 3 | Program Learning Outcome 4 |
| CETT 1307 | I, P |  |  |  |
| CETT 1409 | I, P |  |  |  |
| CETT 1425 | I, P |  |  |  |
| TECM 1343 | I, P |  |  |  |
| HITT 1305 |  | I | I | I |
| BIOM 2201 |  | I, P | I | I |
| BIOM 2311 | E, A | I, P | P | P |
| BIOM 2315 | E, A | E, A | P | P, E, A |
| BIOM 2319 |  | E, A | E, A | P, E, A |
| BIOM 2331 |  | E, A | E, A | P, E, A |
| BIOM 2337 |  | E, A | E, A | P, E, A |
| BIOM 2343 |  | P, E | P | P |
| CPMT 1305 | I, P |  |  |  |
| ITNW 1358 | I, P |  |  |  |

**Assessment Plan for Program Learning Outcomes**

Review existing assessment methods and current practices for collecting/gathering student data to identify direct (and possibly indirect methods of assessment). Remember that the data will need to be gathered, analyzed, and used to support the program’s continuous improvement processes.

**Note:** Because courses from other disciplines already have assessment plans in place, they do not have to be included in this assessment plan. Nonetheless, proposers must work collaboratively with these other disciplines to stay current and up-to-date with the assessment plans in these courses.

|  |  |  |
| --- | --- | --- |
| Program-Level Learning Outcome (e.g. Students will describe the impact of various cultures on American cuisine.) | Assessment Measure(s) and Where Implemented in Curriculum – Description of Instrument(s)/ process(es) used to measure results and indication of where the assessment will be collected in curriculum. (e.g. Essay on Cultural influences on American cuisine in CUIS 1300.) | Targets- Level of Success Expected  (e.g. 80% of students score 2.5 or better on rubric for essay on cultures and cuisine.) |
| Students will be able to demonstrate the safe/appropriate use of troubleshooting skills in electronics and networking to test, analyze and maintain biomedical equipment in proper working order. | * Lab exercise on performance verification and testing of infusion pumps (BIOM 2311). * Lab exercise to troubleshoot networking and telemetry of biomedical equipment. (BIOM 2315). | 90% of students will earn a grade of 80% or higher on indicated measures  70% of students will earn a grade of 70% or higher on indicated measures |
| Students will be able to do performance verification of biomedical equipment to ensure accurate measurements and compliance with regulatory standards. | * Lab exercise to do performance verification of telemetry equipment (BIOM 2315) * Lab exercise to do performance verification of diagnostic ultrasound machine (BIOM 2319) * Lab exercise to do performance verification of lab centrifuge (BIOM 2331) * Lab exercise to do performance verification of a ventilator (BIOM 2337) | 70% of students will earn a grade of 70% or higher on indicated measures |
| Students will be able to safely perform preventive maintenance and general repairs on biomedical equipment. | * Lab exercise requiring preventive maintenance and general repairs of diagnostic ultrasound machine (BIOM 2319) * Lab exercise requiring preventive maintenance and general repairs of lab centrifuge (BIOM 2331) * Lab exercise requiring preventive maintenance and general repairs of a ventilator (BIOM 2337) | 70% of students will earn a grade of 70% or higher on indicated measures |
| Students will be able to document accurately the records of maintenance, repair, and performance verification of biomedical equipment in a Computerized Maintenance Management System (CMMS) using proper terminology. | * Lab exercise to document preventive maintenance, general repairs, and performance verification of telemetry equipment (BIOM 2315) * Lab exercise to document preventive maintenance, general repairs, and performance verification of diagnostic ultrasound machine (BIOM 2319) * Lab exercise to document preventive maintenance, general repairs, and performance verification of lab centrifuge (BIOM 2331) * Lab exercise to document preventive maintenance, general repairs, and performance verification of a ventilator (BIOM 2337) | 70% of students will earn a grade of 70% or higher on indicated measures |