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| jscc logo | **Assessment Record** |

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| **Program:** | **Biomedical Equipment Technology** |  **Assessment period:** | **2018 - 2019** |

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| **Program or Department Mission:**  |

The mission of the Manufacturing and Technology Program (Biomedical Equipment Technology Option) at Jefferson State Community College is to prepare students to enter the field of medical equipment repair as competent and entry level technicians. The Program exists to supply the medical industry with qualified people to maintain and repair the equipment found in various medical facilities such as hospitals, clinics and medical equipment manufacturers. We are committed to accomplishing this mission by properly educating the students via theory and hands on application. |

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| **Instructional Program Outcomes & Assessment Plan** |
| **Intended Outcomes** | **Means of Assessment** | **Criteria for Success** | **Summary & Analysis of Assessment Evidence** | **Use of Results** |
| Program Completion-Graduation rate will meet or exceed state viability requirement. | IRIR Data | Graduation rate will be equal to or greater than state viability requirements of 7.5 graduates. |

|  |  |  |  |
| --- | --- | --- | --- |
| STC | CER | AAS | Total |
| 12 | 10 | 10 | 32 |

 | Outcome Met |
| Concentration Course Satisfaction - At least 75% of graduates surveyed will report satisfaction with educational preparation. | BMET concentration cohort students are surveyed each semester via a *Class Climate Survey.*Graduates are also surveyed at 12-month post-graduation. | At least 75% of the students surveyed will indicate program satisfaction. | **87%** of students surveyed post-graduation report being *very satisfied to satisfied* with the program. | Outcome Met |
| Job Placement - 75% of graduates will be employed in field or in a manufacturing technology related field within twelve months of graduating. | Graduate Survey at 12-month post-graduation. | 75% of graduates will be employed within *12 months* of graduating in field or in a manufacturing technology related field. | **85%** of the graduates contacted report having a job in field. | Outcome Met |
| Employer Satisfaction - 80% of employers surveyed will indicate that graduates were adequately prepared for entry level positions (as indicated by very well prepared or adequately prepared on Employer Questionnaire). | Employer clinical internship evaluations.Employer survey at 12-month post-graduation. | 1. Students participating in the concentration cohort of the BMET option (as a whole) will earn a *Clinical Internship Evaluation Rubric Score* of at least *(3)* in BET 240
 | 1.**Rubric Used**

|  |  |
| --- | --- |
| Grade | Points |
| F | 0 |
| D | 1 |
| C | 2 |
| B | 3 |
| A | 4 |

**Class Rubric Average Goal***2 Points or Higher***Class Average – 3.7** | Outcome Met |
| **Plan submission date: 26-Sep-19** | **Submitted by:** Eric Carwell  |

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| jscc logo | **Assessment Record** |

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| **Program:** | **Biomedical Equipment Technology** |  **Assessment period:** | **2018 - 2019** |

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| **Program or Department Mission:**  |

The mission of the Manufacturing and Technology Program (Biomedical Equipment Technology Option) at Jefferson State Community College is to prepare students to enter the field of medical equipment repair as competent and entry level technicians. The Program exists to supply the medical industry with qualified people to maintain and repair the equipment found in various medical facilities such as hospitals, clinics and medical equipment manufacturers. We are committed to accomplishing this mission by properly educating the students via theory and hands on application. |

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| **Instructional Program Student Learning Outcomes & Assessment Plan** |
| **Intended Outcomes** | **Means of Assessment** | **Criteria for Success** | **Summary & Analysis of Assessment Evidence** | **Use of Results** |
| Students admitted to the BET program will complete the program as technically competent individuals able to service and maintain medical equipment in a safe and proficient manner. | 1. During their course of study in the BET concentration curriculum, students are required to complete several hands-on experiments and lab assignments.
 | 1. Students participating in the concentration cohort of the BMET option (as a whole) will earn a *Clinical On-Site Study Electrical Safety Analyzer Performance Score* of at least *(2)* in BET 240
2. Students participating in the concentration cohort of the BMET option (as a whole) will earn a *Clinical On-Site Study Troubleshooting, Repair and Preventative Maintenance Performance Rubric Score* of at least *(2)* in BET 240
 | **Rubric Used**

|  |  |
| --- | --- |
| Grade | Points |
| F | 0 |
| D | 1 |
| C | 2 |
| B | 3 |
| A | 4 |

**Class Rubric Average Goal***2 Points or Higher***Class Average – 3.8****Rubric Used**

|  |  |
| --- | --- |
| Grade | Points |
| F | 0 |
| D | 1 |
| C | 2 |
| B | 3 |
| A | 4 |

**Class Rubric Average Goal***2 Points or Higher***Class Average – 3.7** | Outcome Met |
| Students will demonstrate the ability to work effectively with other technicians as a team. | 1. During their course of study in the BET concentration curriculum, students will often complete the hands-on experiment assignments as a member of a team.
 | 1. Students participating in the concentration cohort of the BMET option (as a whole) will (working as a team) earn a *Clinical On-Site Study Communication, Professionalism and Teamwork Performance* *Rubric Score* of at least *(2)* in BET 240
 | **Rubric Used**

|  |  |
| --- | --- |
| Grade | Points |
| F | 0 |
| D | 1 |
| C | 2 |
| B | 3 |
| A | 4 |

**Class Rubric Average Goal***2 Points or Higher***Class Average – 3.8** |  |
| Utilize effective written communication and maintain medical record and equipment preventive maintenance forms. | 1. To introduce students to the importance of proper documentation, labs and assignments in BET 241 requires students to submit a research paper work centered on Law and Legal Issues in the medical profession. This research must be presented in a particular format just as would when using a BMET Equipment Database.
 | 1. Students participating in the concentration cohort of the BMET option (as a whole) will earn a *Law & Legal Research Final Draft Research Paper Rubric Score* of at least (2) in BET 241.
 | **Rubric Used**

|  |  |
| --- | --- |
| Grade | Points |
| F | 0 |
| D | 1 |
| C | 2 |
| B | 3 |
| A | 4 |

**Class Rubric Average Goal***2 Points or Higher***Class Average – 3.52** | Outcome Met |
| Maintain effective verbal and nonverbal communication with health care providers, patients/clients, caregivers and the general public. | 1. To introduce students to the importance of effective communication, BET 240 requires the student to interact with other healthcare givers, patients, and the general public in a professional manner.
 | 1. Students participating in the concentration cohort of the BMET option (as a whole) will earn a
2. *Clinical On-Site Study Communication, Professionalism and Teamwork Performance* *Rubric* score of (2) in BET 240.
 | **Rubric Used**

|  |  |
| --- | --- |
| Grade | Points |
| F | 0 |
| D | 1 |
| C | 2 |
| B | 3 |
| A | 4 |

**Class Rubric Average Goal***2 Points or Higher***Class Average – 3.8** | Outcome Met |
| **Plan submission date: 26-Sep-19** | **Submitted by:** Eric Carwell |
| jscc logo | **Assessment Record** |

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| **Program:** | **Biomedical Equipment Technology – BET211** |  **Assessment period:** | **2018- 2019** |

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| **Program or Department Mission:**  |

The mission of the Manufacturing and Technology Program (Biomedical Equipment Technology Option) at Jefferson State Community College is to prepare students to enter the field of medical equipment repair as competent and entry level technicians. The Program exists to supply the medical industry with qualified people to maintain and repair the equipment found in various medical facilities such as hospitals, clinics and medical equipment manufacturers. We are committed to accomplishing this mission by properly educating the students via theory and hands on application. |

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| **Course Student Learning Outcomes & Assessment Plan** |
| **Intended Outcomes** | **Means of Assessment** | **Criteria for Success** | **Summary & Analysis of Assessment Evidence** | **Use of Results** |
| Student will be able to perform a basic electrical safety procedure on medical devices with or without leads. | 1. During their course of study in BET211 student will be required perform a basic electrical safety procedure on a medical device.
 | 1. Students participating in the concentration curriculum of the BMET option (as a whole) will earn a *BET211 (Lab 4) Basic Electrical Safety Analyzer Performance* Rubric Score of at least (2) in BET 211
 | **Rubric Used**

|  |  |
| --- | --- |
| Grade | Points |
| F | 0 |
| D | 1 |
| C | 2 |
| B | 3 |
| A | 4 |

**Class Rubric Average Goal***2 Points or Higher***Class Average – 4.0** | Outcome Met |
| Student will demonstrate the ability troubleshoot, repair and perform preventative maintenance. | 1. During their course of study in BET211 students will learn how to perform preventative maintenance procedures on various types of standard medical devices.
 | 1. Students participating in the concentration curriculum of the BMET option (as a whole) will earn a *BET211 (Lab 7) Defibrillator Energy Performance Test* Rubric Score of at least (2) in BET 211
 | **Rubric Used**

|  |  |
| --- | --- |
| Grade | Points |
| F | 0 |
| D | 1 |
| C | 2 |
| B | 3 |
| A | 4 |

**Class Rubric Average Goal***2 Points or Higher***Class Average – 4.0** | Outcome Met |
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| **Plan submission date: 26-Sep-19** | **Submitted by:** Eric Carwell |
| jscc logo | **Assessment Record** |

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| **Program:** | **Biomedical Equipment Technology – BET233** |  **Assessment period:** | **2018 - 2019** |

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| **Program or Department Mission:**  |

The mission of the Manufacturing and Technology Program (Biomedical Equipment Technology Option) at Jefferson State Community College is to prepare students to enter the field of medical equipment repair as competent and entry level technicians. The Program exists to supply the medical industry with qualified people to maintain and repair the equipment found in various medical facilities such as hospitals, clinics and medical equipment manufacturers. We are committed to accomplishing this mission by properly educating the students via theory and hands on application. |

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| **Course Student Learning Outcomes & Assessment Plan** |
| **Intended Outcomes** | **Means of Assessment** | **Criteria for Success** | **Summary & Analysis of Assessment Evidence** | **Use of Results** |
| Student will demonstrate the ability to find and identify basic computer components and peripherals.  | 1. During their course of study in BET 233 students are required to participate in a hands-on lab where the will be required to identify and explain the function of basic computer components and peripherals.
 | 1. Students participating in the concentration curriculum of the BMET option (as a whole) will earn a *Pulse & Computer Circuits* *Lab3* Rubric Score of at least (2) in BET 233
 | 1.

**Rubric Used**

|  |  |
| --- | --- |
| Grade | Points |
| F | 0 |
| D | 1 |
| C | 2 |
| B | 3 |
| A | 4 |

**Class Rubric Average Goal***2 Points or Higher***Class Average – 4.0** | Outcome Met |
| Student will demonstrate the ability to find resources and develop a research topic.Using APA format, the student will successfully complete final draft research paper based on research topic and abstract submitted.  | 1. During their course of study in BET 233 students are required to submit a research paper centered on computer technology In the medical profession
 | 1. Students participating in the concentration curriculum of the BMET option (as a whole) will earn a *Pulse & Computer Circuits Reading Assignment 2* Rubric Score of at least (2) in BET 233
 | **Rubric Used**

|  |  |
| --- | --- |
| Grade | Points |
| F | 0 |
| D | 1 |
| C | 2 |
| B | 3 |
| A | 4 |

**Class Rubric Average Goal***2 Points or Higher***Class Average – 3.0** | Outcome Met |
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| **Plan submission date: 26-Sep-19** | **Submitted by:** Eric Carwell |
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| **Program:** | **Biomedical Equipment Technology – ELM200** |  **Assessment period:** | **2018 - 2019** |

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| **Program or Department Mission:**  |

The mission of the Manufacturing and Technology Program (Biomedical Equipment Technology Option) at Jefferson State Community College is to prepare students to enter the field of medical equipment repair as competent and entry level technicians. The Program exists to supply the medical industry with qualified people to maintain and repair the equipment found in various medical facilities such as hospitals, clinics and medical equipment manufacturers. We are committed to accomplishing this mission by properly educating the students via theory and hands on application. |

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| **Course Student Learning Outcomes & Assessment Plan** |
| **Intended Outcomes** | **Means of Assessment** | **Criteria for Success** | **Summary & Analysis of Assessment Evidence** | **Use of Results** |
| Students will learn about *Multimeters* and their functions within electronic circuits via the Nida Training System. | 1. During their course of study in ELM 200 students are required to complete several hands-on experiments and lab assignments.
 | 1. Students participating in the concentration curriculum of the BMET option (as a whole) will earn an *Multimeter Use Hands-On Experiment*

Rubric Score of at least (2) in ELM 200 | **Rubric Used**

|  |  |
| --- | --- |
| Grade | Points |
| F | 0 |
| D | 1 |
| C | 2 |
| B | 3 |
| A | 4 |

**Class Rubric Average Goal***2 Points or Higher***Class Average – 3.8** | Outcome Met |
| Students will learn about *Basic DC Circuits* and their functions via the Nida Training System. | 1. During their course of study in ELM 200 students are required to complete several hands-on experiments and lab assignments.
 | 1. Students participating in the concentration curriculum of the BMET option (as a whole) will earn a *Series-Parallel Circuits Hands-On Experiment* Rubric Score of at least (2) in ELM 200
 | **Rubric Used**

|  |  |
| --- | --- |
| Grade | Points |
| F | 0 |
| D | 1 |
| C | 2 |
| B | 3 |
| A | 4 |

**Class Rubric Average Goal***2 Points or Higher***Class Average – 4.0** | Outcome Met |
| Students will learn how *to Identify a voltage divider circuit.* Identify a voltage divider as being loaded or unloaded. Measure loaded and unloaded voltage divider voltages.via the Nida Training System. | 1. During their course of study in ELM 200 students are required to complete several hands-on experiments and lab assignments.
 | 1. Students participating in the concentration curriculum of the BMET option (as a whole) will earn a *Identify a voltage divider circuit. Identify a voltage divider as being loaded or unloaded. Measure loaded and unloaded voltage divider voltages.* Rubric Score of at least (2) in ELM 200
 | **Rubric Used**

|  |  |
| --- | --- |
| Grade | Points |
| F | 0 |
| D | 1 |
| C | 2 |
| B | 3 |
| A | 4 |

**Class Rubric Average Goal***2 Points or Higher***Class Average – 4.0** | Outcome Met |
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| **Plan submission date: 26-Sep-19** | **Submitted by:** Eric Carwell |
| jscc logo | **Assessment Record** |
| **Program:** | **Biomedical Equipment Technology – ELM201S** |  **Assessment period:** | **2018 - 2019** |

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| **Program or Department Mission:**  |

The mission of the Manufacturing and Technology Program (Biomedical Equipment Technology Option) at Jefferson State Community College is to prepare students to enter the field of medical equipment repair as competent and entry level technicians. The Program exists to supply the medical industry with qualified people to maintain and repair the equipment found in various medical facilities such as hospitals, clinics and medical equipment manufacturers. We are committed to accomplishing this mission by properly educating the students via theory and hands on application. |

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| **Course Student Learning Outcomes & Assessment Plan** |
| **Intended Outcomes** | **Means of Assessment** | **Criteria for Success** | **Summary & Analysis of Assessment Evidence** | **Use of Results** |
| Student will discuss the operation and the use of the oscilloscope. Student will also learn how to use the oscilloscope in analyzing circuits and ac waveforms  | 1. During their course of study in ELM 201S students are required to complete several hands-on experiments and lab assignments.
 | 1. Students participating in the concentration curriculum of the BMET option (as a whole) will earn a How To Use The Oscilloscope Lab Rubric Score of at least (2) in ELM 201
 | **Rubric Used**

|  |  |
| --- | --- |
| Grade | Points |
| F | 0 |
| D | 1 |
| C | 2 |
| B | 3 |
| A | 4 |

**Class Rubric Average Goal***2 Points or Higher***Class Average – 3.8** | Outcome Met |
| Students will learn how to troubleshoot RL Series Circuits via the NIDA Training System. | 1. During their course of study in ELM 201S students are required to complete several hands-on experiments and lab assignments.
 | 1. Students participating in the concentration curriculum of the BMET option (as a whole) will earn a RL Series Circuits Troubleshooting Lab Rubric Score of at least (2) in ELM 201
 | **Rubric Used**

|  |  |
| --- | --- |
| Grade | Points |
| F | 0 |
| D | 1 |
| C | 2 |
| B | 3 |
| A | 4 |

**Class Rubric Average Goal***2 Points or Higher***Class Average – 3.5** | Outcome Met |
| Students will learn the principles and theories of Inductive Reactance in AC circuits via the NIDA Training System. | 1. During their course of study in ELM 201S students are required to complete several hands-on experiments and lab assignments.
 | 1. Students participating in the concentration curriculum of the BMET option (as a whole) will earn a Series and Parallel LCR Circuit Lab Rubric Score of at least (2) in ELM 201
 | **Rubric Used**

|  |  |
| --- | --- |
| Grade | Points |
| F | 0 |
| D | 1 |
| C | 2 |
| B | 3 |
| A | 4 |

**Class Rubric Average Goal***2 Points or Higher***Class Average – 3.6** |  |
| **Plan submission date: 26-Sep-19** | **Submitted by:** Eric Carwell |