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| jscc logo | **Assessment Record** |

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| **Program:** | **Biomedical Equipment Technology** | **Assessment period:** | **2017 - 2018** |

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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 | ASS | Total | | 22 | 20 | 22 | 64 | | 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. | **95%** of students surveyed 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. | **84%** 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 – 3.3** | Outcome Met |
| **Plan submission date: 10-Oct-18** | | | **Submitted by:** Eric Carwell | |

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| **Program:** | **Biomedical Equipment Technology** | **Assessment period:** | **2017 - 2018** |

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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 – 3.2**  **Rubric Used**   |  |  | | --- | --- | | Grade | Points | | F | 0 | | D | 1 | | C | 2 | | B | 3 | | A | 4 |   **Class Rubric Average Goal**  *2 Points or Higher*  **Class Average – 3.2** | 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 – 3.5** |  | |
| 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 – 3.3** | 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 – 3.5** | Outcome Met | |
| **Plan submission date: 10-Oct-18** | | | | **Submitted by:** Eric Carwell | | |
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| **Program:** | **Biomedical Equipment Technology – BET240** | **Assessment period:** | **2017 - 2018** |

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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 BET 240 student will be required perform a basic electrical safety procedure as an intern. | 1. Students participating in the concentration curriculum of the BMET option (as a whole) will earn a *Clinical On-Site Study Electrical Safety Analyzer 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 – 3.2** | Outcome Met | |
| Student will demonstrate the ability troubleshoot, repair and perform preventative maintenance. | 1. During their course of study in BET 240 students will shadow professional BMET’s where they will perform under supervision, troubleshooting, repair and preventative maintenance. | 1. Students participating in the concentration curriculum of the BMET option (as a whole) will earn a *Clinical On-Site Study Troubleshooting, Repair and Preventative Maintenance* 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 – 3.2** | Outcome Met | |
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| **Plan submission date: 10-Oct-18** | | | | **Submitted by:** Eric Carwell | | |
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| **Program:** | **Biomedical Equipment Technology – BET241** | **Assessment period:** | **2017 - 2018** |

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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 resources and develop a research topic. | 1. During their course of study in BET 241 students are required to submit a research paper work centered on Law and Legal Issues in the medical profession. | 1. Students participating in the concentration curriculum of the BMET option (as a whole) will earn a *Law & Legal Research Resources and Topic Development* 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 – 3.2** | Outcome Met | |
| 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 241 students are required to submit a research paper work centered on Law and Legal Issues in the medical profession. | 1. Students participating in the concentration curriculum 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 – 3.3** | Outcome Met | |
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| **Plan submission date: 10-Oct-18** | | | | **Submitted by:** Eric Carwell | | |
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| **Program:** | **Biomedical Equipment Technology – ELM206S** | **Assessment period:** | **2017 - 2018** |

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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 *Operational Amplifiers* and their functions within electronic circuits via the Nida Training System. | | 1. During their course of study in ELM 206S 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 *Operational Amplifier Hands-On Experiment* Rubric Score of at least (2) in ELM 206S | | | **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 *Hartley Oscillators* and their functions within electronic circuits via the Nida Training System. | | 1. During their course of study in ELM 206S 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 *Hartley Oscillator Operation Hands-On Experiment* Rubric Score of at least (2) in ELM 206S | | | **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 *Triacs, Diacs and Four-Layer Diodes* and their functions within electronic circuits via the Nida Training System. | | 1. During their course of study in ELM 206S 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 *Triacs, Diacs, and Four-Layer Diodes Hands-On Experiment* Rubric Score of at least (2) in ELM 206S | | | **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: 10-Oct-18** | | | | | | **Submitted by:** Eric Carwell | | | |
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| **Program:** | | **Biomedical Equipment Technology – ELM210** | | | **Assessment period:** | | | **2017 - 2018** | | |

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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 how to build hydraulic circuits and verify circuit integrity via the Amatrol System. | 1. During their course of study in ELM 210 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 *Hydraulic Circuit Building Hands-On Experiment* Rubric Score of at least (2) in ELM 210 | **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 about hydraulic circuit components and their functions within hydraulic systems via the Amatrol Training System. | 1. During their course of study in ELM 210 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 *Transistor Operation* Lab Rubric Score of at least (2) in ELM 210 | **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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