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| jscc logo | **Goal Progress Report** |
| **Program:** | Biomedical Equipment Technology | **Report period:** | **2019-2020** |

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| **What has your unit accomplished from the goals you proposed in the first year of your most recent** **Strategic Plan?**  |
| **Goals** | **Request & Justification/Resources** | **Goal Progress** | **Strategies Implemented & Follow-up** |
| **Goal 1**: Transform the Biomedical Equipment Technology Program Option at Jefferson State Community College to be recognized as the state’s premier provider of education with regards to this discipline. | 1. Use of available grant funding.
2. Use of existing college internal resources to perform and analyze student and industry surveys.
 | 1. Purchased of lab equipment used to enhance the student learning experience.
2. Upgraded class-room technology, also used to enhance student learning experiences.
3. Enhanced the student classroom and lab experience by introducing AR & VR (Augmented & Virtual Reality) systems.
4. Relocated the previously purchased (16) Nida stations in the Manufacturing & Technology Building Room 028 to Classroom 021 (George Layton Building), which is now the new Nida lab.
5. This move allowed for the expansion of the workstations from 16 to 25, which will allow for a normal class size of 25 students.
* Purchased (9) new workstations during this process.
* Purchased 9 desktop computers to accommodate the new Nida trainers.
1. Completed renovation to main class-room as well as upgraded class-room technology.
2. Completed renovation to instructor’s office space
3. Students continue to report satisfaction with available resources via student surveys.
4. Employers reported that at least 80% of students graduating from the program knew how to use standard test equipment and know how to test basic medical equipment via clinical internship evaluations.
5. Expanded student learning and marketability by Introducing a new credentialed course to the curriculum.
 | 1. The program will continue to seek out opportunities to fund lab equipment and other supplies via grant funds and other support.
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| **Goal 2:** Retain quality full-time and part-time instructors to ensure the option meets the need of the students. | 1. Salary per appropriate salary schedule to hire and/or maintain full-time and part-time instructors as needed based on class loads.
2. Salary per appropriate salary schedule to hire and/or maintain work study student.
3. $3200: Association for the Advancement of Medical Instrumentation (AAMI) Conference, Long Beach, CA June 7-10, 2020 – Conference Fees: $1100, Travel/Living: $1400.
4. $741: Association for the Advancement of Medical Instrumentation (AAMI) Institutional Membership.
5. Use current AAMI CBET Certification Preparation Software and Nida Software installed on the computers in the Nida Lab (MT Building – Room 028)
 | 1. Retained all current full-time and part-time instructors.
2. Retained work study student to assist with administrative task as well as assist with labs
3. Provided Professional Development opportunities to train instructors.
* Funds approved to attend the annual AAMI Conference. However, due to COVID-19 the conference has been postponed.
* Attended AAMI Educators Webinar. March 2020.
* Active member of the AAMI Educators group.
* Biomed Instructor (Eric Carwell) completed MSSC course. *Certification not yet complete.*
* Biomed Lab Assistant (David O’Hern) completed MSSC course. *Certification not yet complete.*
1. Provided CBET & ETA (DC & AC) Certification preparation for program students.
* Continued use of AAMI CBET Certification Preparation Software to help students prepare for CBET exam and Nida Software installed on the computers in the Nida Lab (GLB Building – Room 023) for daily classroom instruction as well as DC & AC certification preparation.
 | 1. The program will continue to seek out opportunities providing professional development opportunities for the staff in an effort to enhance their skills. The program will seek funding via grant funds and other support.
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| **Goal 3:** Maintain the student laboratories with up-to-date instructional equipment in order to provide quality instruction. | 1. $3000: Routine lab/classroom supplies and materials. Electronic components, electronic kits etc...
2. $3000/Unit: Purchase (1) Large scale 3D printer. Program option currently has one. However, adding another would allow for a 2:1 student (team) to machine ratio. BET233
* $160/Unit: Purchase (4) Assortment Packs of Small Spool PLA filament.
* $460/Unit: Purchase (4) Assortment Packs of Large Spool PLA filament. Printer filament is a Basic 3D Printer supply.
1. $170/Unit: Purchase (6) Soldering Stations. Standard piece of *Electronic Repair Equipment* that the entry level biomed technician should know how to use.
2. $490/Unit: Purchase (7) De-Soldering Stations. Standard piece of *Electronic Repair Equipment* that the entry level biomed technician should know how to use.
3. $2500/Unit: Purchase (5) Electrosurgical Units. Standard piece of medical equipment that the entry level biomed technician should know how to service.
 | 1. Purchased equipment and supplies to provide high quality campus *laboratory experiences.*
2. Established a 3D Printer Station. This station aids in the introduction of students to world of 3D printing and design. 3D printing is fast becoming a commonly used tool in every industry allowing employee-based innovation to flourish. Used in conjunction with Tinker Cad platform and Little Bits Code kit. Introducing students to basic coding and product research and development.
* Established 3D Printer filament inventory. This inventory ensures that students have the supplies needed to complete their assigned projects. 3D printers are now being used in some cases to repair and create replacement parts for some medical devices.
1. Purchased (6) Soldering Stations. Standard piece of Electronic Repair Equipment that the entry level biomed technician should know how to use.
2. Purchased (7) De-Soldering Stations. Standard piece of Electronic Repair Equipment that the entry level biomed technician should know how to use.
3. Purchased (5) Electrosurgical Units. Standard piece of medical equipment that the entry level biomed technician should know how to service.
4. Updated some of the (Electronics Stations) bench Equipment. Updated equipment on the benches allow students to be better prepared to test, monitor and calibrate highly specialized medical devices.
* The purchase of new multimeters helped students gain valuable experience and insight with regards to the use of high-end electronic test equipment.
1. Purchased Little Bits Electronic Library. This library exposes students to basic coding and electronic product development.
 | 1. The program will continue to seek out opportunities to keep our labs and the equipment within updated, innovative and functional. The program will seek funding via grant funds and other support.
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| **Goal 4:** Faculty and students have access to technology and *classroom resources* to achieve course and program outcomes. | 1. $1400.00 for miscellaneous equipment and supplies needed.
2. $7422.87: Install Smart Board GLB-021B. This board is essential for class room instruction as it will allow for audio visual instruction, appeal to all learning modalities and allow from board to student device file sharing and student device to board engagement. The board will also be used as an aid to prepare student for CBET and ETA Certification.
3. $150/Unit. Purchase Annual Curriculum Licenses for (30) seats – Nida System. These courses facilitate and enhance instruction in several of the courses offered. Would allow for a 1:1 student to machine ratio. ELM200, ELM201, ELM202, ELM205 and ELM206S.
4. $5437.59/ Purchase Annual Curriculum Licenses for all five (5) zSpace Virtual Reality units. There are six (6) courses identified that will facilitate and enhance instruction in several of the BMET courses offered. Would allow for a 5:1 student to machine ratio. BET211, BET222, BET233, BET234, ELM200, ELM201

The AR/VR Training Stations units will be used to enhance the student’s classroom and lab experience by offering a 3 dimensional view of many of the topics covered in biomedical equipment technology such as: EKG, The anatomy of the heart and lungs, the brain as well as other parts of the body; MRI, CAT Scan and X-Ray; This unit also has a developer’s kit that allows for the creation of individual augmented reality projects. This equipment will also serve as a great recruiting tool for future students. 1. $1000.00 Purchase miscellaneous office supplies and equipment needed.
 | 1. Purchased necessary equipment and supplies to provide high quality campus *class-room experience*.
2. Installed Smart Board GLB-021B. This board is essential for class room instruction as it allows for audio visual instruction, appeals to all learning modalities and allows (from board to student) device file sharing and (student device) to board engagement. The board also used as an aid to prepare students for CBET and ETA Certifications.
3. Purchased Annual Curriculum Licenses for (30) seats – Nida System. These courses facilitate and enhance instruction all the courses offered.
4. Purchased Annual Curriculum Licenses for all five (5) zSpace Virtual Reality units. There are six (6) courses identified that will facilitate and enhance instruction in several of the BMET courses offered.
5. Purchased necessary equipment and supplies to provide instructors with tools needed to support the needs and request of the students in an inviting atmosphere.
6. Purchased miscellaneous supplies and equipment needed to service *student administrative needs and request*.
 | 1. The program will continue to seek out opportunities to keep our class-rooms and the equipment within updated, innovative and functional. The program will continue to seek funding via grant funds and other support.
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| **Submission Date:** 27 April 2020 | **Submitted by:** Eric Carwell |