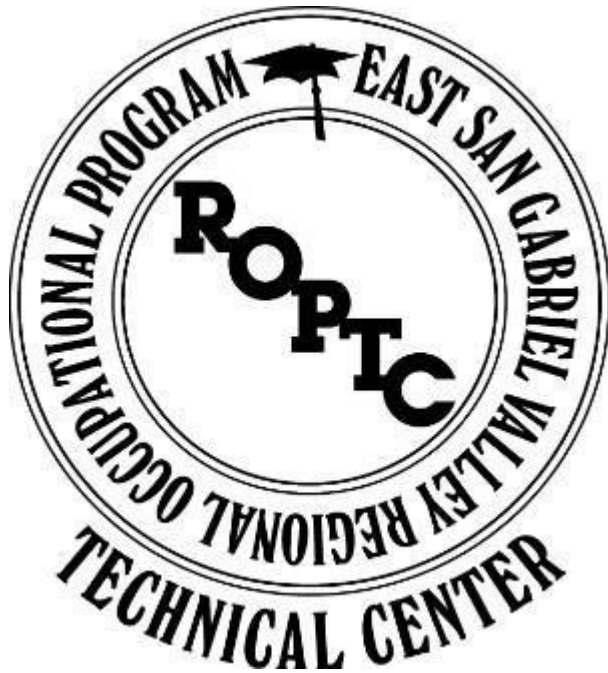


# East San Gabriel Valley Regional Occupational and Technical Center



TECHNOLOGY MASTER PLAN  
January 2018 – January 2021

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## **I. BACKGROUND**

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Regional Occupational Centers and Programs (ROCPs) are a public education service providing quality career preparation and technical education by offering practical, hands- on career preparation and career guidance for students and adults, enabling them to achieve higher education goals or acquire higher wage employment in careers for which they are suited and in which they have interest. ROCPs originated in 1967, as a part of the California Education Code, in response to the state commitment to making skills and career training available to all students without regard to race, color, creed, gender, national origin, or age. ROCPs in California serve more than 500,000 high school students and adults annually. ROCPs operate under three different governing formats, Joint Power Agreements comprised of two or more school districts, County Board Of Education, and Single District. In addition to specific skills and comprehensive career education, ROCPs provide instruction in employment survival skills, placement assistance, counseling and guidance services, and critical support services for students.

The East San Gabriel Valley Regional Occupational Program and Technical Center was formed under a Joint Power Agreement and includes seven Unified School Districts and currently serves approximately 10,000 students annually. Our student population is comprised of a diverse range of ethnicities, incomes, genders, ages, and abilities. They come to the ROP to obtain practical, hands-on career preparation and career guidance. The ESGVROP/TC's ability to serve students is heightened by its membership in the East San Gabriel Partnership, an affiliation of educators, communities, and businesses. The partnership covers approximately 200 square miles of the San Gabriel Valley and is comprised of thirteen school districts, including 67 high schools, 4 community colleges, 2 universities, over 80 community-based service organizations, over 500 businesses, more than 20 government and social agencies and 8 labor unions. The ESGVROP/TC is fully accredited by the Western Association of Schools and Colleges (WASC) and the Council on Occupational Education (COE) as a secondary and post-secondary school and is able to grant a transferable technical degree (Associate of Applied Science) to students at the completion of their program of study. Established in 1970, the ESGVROP/TC currently provides a wide selection of instructional programs and educational services such as career assessment, integrated academics, alternative education instruction, tutoring and mentoring, job development, and job placement are offered to a wide cross-section of primarily high school students throughout the districts and the community. Classrooms have been converted into contextualized examples of the lessons learned, allowing students to relate learning to real work experiences. Community-based internships in local business and industry sites are offered in many classes. The Curriculum includes many technology courses, and certification programs. The new changes to the California Education Code makes technology even more important as high schools seek to provide career pathway options to all students with career training from ROPs and continuation available in local community colleges. Off-campus sites includes a variety of technology classes, primarily involving computers and Internet use; however, the technology also includes photography developing labs and film processing, silkscreen machinery, print shop machinery, technology related to medical equipment.

## **II. MISSION AND PHILOSOPHY**

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### **Mission Statement**

The East San Gabriel Valley Regional Occupational Program & Technical Center provides all students with the highest quality academic and technical skills necessary to be well educated citizens, and responsible, productive employers and employees.

## Student learning outcomes (SLOs)

Students who complete training at East San Gabriel Valley Regional Occupational Program and Technical Center will:

1. **Demonstrate appropriate work ethic through:**
  - ◆ Punctual, regular attendance
  - ◆ Personal integrity and respect
  - ◆ Collaboration and teamwork, working cooperatively with others
  - ◆ Positive attitude, enthusiasm, initiative, decisiveness
  
2. **Demonstrate appropriate employment preparation through:**
  - ◆ Assessment, career planning, goal setting
  - ◆ Resume, employment application, interview skills
  - ◆ Attainment of course specific competencies
  
3. **Demonstrate entry level use of appropriate technology and equipment through:**
  - ◆ Adherence to safety procedures, precautions
  - ◆ Application of knowledge, skills
  - ◆ Workplace simulation/internships
  
4. **Demonstrate effective communication through:**
  - ◆ Workplace appropriate verbal, written and listening skills
  - ◆ Performance of verbal and written directions
  
5. **Demonstrate critical thinking skills through:**
  - ◆ Analysis/evaluation and solution of problems
  - ◆ Practical/successful application of available resources
  
6. **Demonstrate professionalism through:**
  - ◆ Socially appropriate interaction, ethical use of personal technical and social media
  - ◆ Industry appropriate dress and appearance
  - ◆ Confidentiality

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## III. TECHNOLOGY PLAN GOALS

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### Enhance Curriculum

- Students will be able to use technology for specific academic content and career-centered applications. Computers will be available with appropriate hardware and software to allow them to perform research, learn the elements of their course of study and provide useful written responses to class requirements.
- Teachers will provide training and assistance, to increase the student's opportunities to use technology to enhance their academic achievement. In courses where learning technology repair skills or use of specific software is the objective, sufficient technology-effective computers will be available for each student to learn and practice with, containing software appropriate to the learning.

- Where additional technology is needed (other than computers), classrooms will be provided with equipment that will allow simulations of true-life activities (e.g., medical equipment, etc.).
- Where necessary for the research and development of computer skills, networking with the Internet will be available for teacher and student use.
- All teachers will receive access to an Internet-available computer. This will allow them to communicate with other staff, receive updates on their course curriculum, research the job market, and communicate with parents regarding student progress and with students when they are not able to attend classes.
- Contemporary training courseware software with multiple site permits, will allow students to take industry certification exams online, and complete online coursework.

### **Staff Development**

- All staff need to be technologically savvy for effective and timely communication, to maintain information on pathway and employment trends, and to receive updates on advances in their field of expertise. To this end, a series of staff developments offering basic and advanced instruction in the elements of Internet access and use are needed.
- For effective classroom management, teachers are being asked to use computer programs to track student achievement, maintain grading information, and provide student demographics. With that in mind, staff developments are needed to train staff on how to use the Classmate (by Harris Solutions) software acquired, and how to forward information securely to the ROP research team.
- Staff needs to maintain communications with administration, even when not in the office. To this end, administration and selected staff will be trained in the use of, and provided with, cell phones, and training on email sending, receiving, and storing procedures.
- Teachers and staff need regular training in new software and online curriculum as it becomes available.

### **Infrastructure, Technical Support, Hardware and Software**

- Necessary technology and supportive infrastructure will be available for all instructors, including technology needed for the course and communications for connecting with all areas of the ROP. This will require wiring for classrooms, software permits, updated hardware, and technicians able to maintain these aspects.
- Staff will be able to communicate by Internet and through telephone services, as well as cell phones for selected staff. This will require computers for all classrooms and administrative sites, Internet access (wiring and permits), a telephone service capable of handling over 200 room locations across a 100 square mile area, and offer calling extras, such as forwarding, multi-site conferencing, messaging, and hands-free.
- Classrooms teaching computer need to have sufficient computers with updated hardware and software for each student to use, and to allow the teacher to monitor use. This will require software multiple-site permits, regularly updated, as new levels of programs are made available, and monitoring software for each instructor.
- The security policy currently in force will be regularly reviewed for effectiveness and needs to update or revise to provide most effective control of Internet use, software replication permits, and legitimate replacement and disposal procedures for all equipment.
- Medical equipment will be regularly checked and, when possible, updated, to provide effective training on equipment most likely to be found on hiring sites and maintain industry accreditation.

- Office equipment will be checked, restored, or replaced to keep training relevant and effective. In addition, copiers and scanners will be maintained with regular servicing and replaced when more cost-effective or better performing machines are found.
- Research equipment (replicators, computers, etc.) will be researched yearly to ensure most cost-effective and up-to-date equipment is used. In addition, programs will be reviewed to ensure relevance to current needs and industry standards.

## **1. PLAN DURATION**

The duration of this current plan will be from January 2018 through January 2021 and will provide strategies for incorporating and renewing technology throughout the ROP district, by strategically planning how and where technology will be integrated into the curriculum. Staff development will be held to demonstrate how teachers will incorporate technology as tools in the education process, and our students will receive technology-rich training experiences that will prepare them for advanced classes or for a career in their chosen field.

Since this plan is “active,” it will be regularly reviewed by the Technology committee, and revised to include new technology and meet additional needs as they are discovered. To this end, yearly surveys of students, teachers, school administrators, staff, parents, and business partners will be performed and analyzed to ensure the effectiveness of the current Plan, or show areas still in need of being addressed. At the end of the three-year period, the plan will be revised as needed, and a new plan produced for the next period.

## **2. TECHNOLOGY COMMITTEE**

As a part of its accreditation review process, ESGVROP/TC developed a Technology Plan wherein The Technology Committee was established and given the responsibility to develop the plan. The Committee is comprised of individuals representing a cross-section of stakeholders of the organization, including teachers, administrators, technicians, clerical staff, parents, business partners, community representatives, school representatives, and student interns. The plan is viewed as a dynamic document expected to be reviewed and modified on a regular basis.

The Committee was charged with the responsibility to develop a technology plan that will provide direction to the Program and the classrooms scattered throughout the districts it serves. The first step in developing the Plan was a survey of classes and facilities to identify needs and audit what currently exists. Teachers described classroom and program development needs, technicians explained infrastructure and communication needs, and students revealed their own levels of technological expertise. Teachers were surveyed as to needs and expertise, and administrators were surveyed as to communication needs and expertise. Assessments were made of existing technology, research was performed to determine the most modern and most effective pieces of equipment, hardware, and software to keep curriculum relevant and keep the staff, and students supplied with the best-possible technology for useful training experiences, and speedy high-wage hiring possibilities. From these surveys, a plan was developed that would include upgrades in equipment, placing of equipment in locations without technology, and training programs that would help staff, and students learn contemporary technology, software, and hardware. The elements of this Plan are explained in the sections herein.

As a part of the Plan, the Committee will continue to meet regularly to review progress on the Plan, conduct surveys of its effectiveness, and revised the Plan to include any new needs determined or register the level of effectiveness of current Plan elements.

### **3. CURRICULUM**

The ESGVROP/TC is a decentralized career-technical program offering 89 high school and over 20 adult classes at 19 high schools, and our Technical Center in West Covina. Courses are offered in 15 Industry Sectors and over 50 career pathways.

The majority, but not all of the instructors of ROP programs are direct employees of the JPA. Programs co-sponsored by the Local Educational Agency (LEA) may have instructors that are contracted from the district where the program is housed. The technology that supports these programs may be jointly purchased, belong to the district, or belong to the ROP. Depending on location, local policy, or need, ROP equipment may be part of a one two- three-classroom stand-alone network or configured into a larger co- sponsoring district's network. The co-sponsoring district may offer some or no supplementary technical support to programs housed on their campuses.

#### **a) Teacher's and Student's Current Access to Technology Tools**

Currently, there are a number of classrooms where computers are used for training students in programming, use of various computer programs, Internet use, online Certification, online exams, and computer repair. Del Norte has two computer labs sufficient enough to accommodate a full classroom of students in each. Additionally, the Media Center is equipped with computers, and printers to allow students to complete research, homework, check emails, create resumes, and apply for on-line employment. Most classrooms contain one or more computers for Internet access, maintaining student records, and monitoring student skills. In addition, five classrooms contain medical equipment necessary for training in emergency or medical procedures. There are a small number of classrooms with insufficient numbers of computers, level of software revision, or task-specific equipment needed to learn technology for their chosen career field. These classrooms need to be supplied with updated technology capable of supporting the advanced programs being taught, therefore having sufficient speed and capacity to effectively complete necessary projects, and allow students to research areas under discussion or hiring trends. In addition, some classrooms are still not wired for Internet access. This is partially because not all Regional Occupational Program and Technical Center class sites belong to the Regional Occupational Program and Technical Center, and consequently any building modifications or electrical revisions need to be approved or accomplished according to the timing or approval of the school and/or district in which the class operates.

The ROP also offers classes such as Silk Screening, requiring a press and frames for that purpose; there is a Journalism and Printing class using an Off-Set Press, and a photo- offset duplication machine; photography and video classes requiring 35 mm and digital cameras, developing equipment and enhancers, a video class requiring editor machines and viewers and an entertainment academy/stagecraft class with industry specific technology for the performing arts. A number of the training classes use overheads, PowerPoint projectors, and TV/VCR or TV/DVD units for special training lessons and examples.

#### **b) Current Use of Technology to Support Teaching and Learning**

All instructors teaching technology-based employability skills have dedicated computer labs with Internet connections or access to campus technology. The Del Norte campuses house laptops and projectors that can be borrowed by staff for presentations. Classrooms are equipped with other audiovisual technology such as televisions and DVD players. Teachers have continuous access to photocopying and other technology based support services such as telephones and voicemail.

Students, whether in-school or adult learners, need to use technology for specific academic content and career-centered applications. To this end, they need current, up-to-date technology to assist them, and allow them to develop technology skills necessary to successfully compete in the career of their choice. As a career technical instructional program, the ESGVROP/TC requires industry-standard technology in the classroom. Students need to research information for the course being taken (history, developments, procedures, job market, and career choices). In addition, the ROP offers courses that lead to industry certification (A+ Certification, for developing skills in computer repair; JAVA and Oracle Certification for advanced postsecondary placement, as well as CNA and Medical Assistant Certification, for skills in para-nursing, EMT Certification, for skills in emergency medical care).

Teachers in the District have access to at least one Internet connected computer. Computer labs offer teachers and students access to the Internet before, during and after school. The computer lab is available for student/teacher use throughout the center's regular hours.

Computers need to be available at all sites, with appropriate hardware and software to all students to perform research, learn the elements of their course of study and provide useful written responses to class requirements. Where necessary, teachers will provide training and assistance, to enhance the student's opportunities to use technology to enhance their academic achievement. The primary consideration in the development of an ROCP course is the existence of a current local and regional job market for applicants with a specific skill or set of skills. When either creating a new course or updating an existing course, a thorough job market analysis is essential. The key to this analysis is the ability of the members of advisory committees and other potential employers to guide the process by communicating information about their industry's employment environment and the characteristics and skill sets of desirable employees.

Competitiveness in the career-technical training market requires a balance between traditionalism and innovation. In order to maintain articulation agreements, the ESGVROP/TC must stay current with the computer software available in regional post-secondary programs.

The ESGVROP/TC, to implement the various aspects of this plan, will continue to embed technology into its staff development and curriculum.

#### **4. STAFF DEVELOPMENT**

There is a growing interdependence between the advancement of technology and professional development. Technology advances have a more significant impact on workers than in the past and will change the workplace by making learning and work synonymous. It is the goal of the ESGVROP/TC to train its students to be successful in this new work environment and to model this work configuration organizationally. An important component of any technology plan is professional development and support for teachers. No plan, no matter how well conceived, will be of any value if it is not implemented at the building and classroom levels. Staff development activities should help teachers become comfortable and proficient with the technology and give them the opportunity to devise ways to use it in their classrooms. The uniqueness of each teacher and class must be acknowledged and used to build specific teaching strategies to meet the goals outlined in the plan. Teachers must have a reason to use the technology and should be involved in developing projects that apply technology to student learning. Teachers also must have access to on-site technical support personnel, who are responsible for troubleshooting and assistance after the technology and lessons are in place. Technology that is not easily accessed and implemented will not be used.



## **5. INFRASTRUCTURE, TECHNICAL SUPPORT, HARDWARE, SOFTWARE**

**5a. Describe the technology hardware, electronic learning resources, networking and telecommunications infrastructure, physical plant modifications, and technical support needed by the district's teachers, students, and administrators to support the activities in the Curriculum and Professional Development Components of the plan.**

Over the past year the IT infrastructure of the ESGVROP/TC has made dramatic progress from an eclectic accumulation 350 IBM clone personal computer (PC), or stand- alone microcomputer & legacy systems to primarily standardized desktop systems by HP/

Compaq/Dell with at least a 2GHz CPU and 4Gig of RAM. These systems run Windows 7 and Windows 10. One of the districts two Macintosh labs has been replaced, with new 20-inch iMacs.

Many services that had been previously hosted on district servers that were in need of upgrades and replacement were moved to the "cloud" being hosted by free services. Google now hosts the district's E-mail and calendaring on their Apps platform. This has provided the district with a more reliable e-mail platform with vastly improved spam filtering.

The organization's IT infrastructure continues to be a piecemeal network with multiple internet connections that form a wide area network (WAN) creatively strung through a Los Angeles County Office of Education (LACOE) Digital subscriber line (DSL). Two Technology Facilitators maintain the ESGVROP/TC's IT infrastructure.

### **Hardware used in the ROP**

Computer Diagnostic Equipment  
Defibrillator  
Digital Cameras  
35 mm Camera  
Electronic Hospital Beds  
Energy Consumption Diagnostic Equipment  
Fax Machines  
HP, Epson, Dell Printers  
Macintosh Computers  
PC Computers  
Photo-Offset Duplication Machine  
Projectors  
Scantron Scanners  
Sound System (Mikes, Amplifiers, speakers)  
Triple Beam Balances  
Video Camera  
Voltage Meter  
Xerox Copiers

### **Software used in the ROP**

3D Studio Max Adobe  
Acrobat  
Adobe Go-Live  
Illustrator  
Photoshop  
Arcview GIS  
AutoCAD

Final CutPro  
Google  
MS Office  
Solid works

Implementation of the Curriculum and Professional Development components of this plan will require additional services and support throughout the district. As funds become available, the district has established several district-wide needs that, once met, will enhance the educational environment and help guarantee the success of this plan.

### **ESGVROP/TC TECHNOLOGY NEEDS:**

1. Complete the modernization of classrooms and district centers to provide the essential infrastructure needed for the successful implementation of modern technology within the district.
2. Utilize the Technology Refresh Program as described below, to stay current with industry technology district-wide.
3. Work towards improving technology-staffing ratio to a level where most technical issues can be resolved within 4 hours, and a maximum of 1 week for complex issues.
4. Expand the use of online work order system district-wide

### **TECHNOLOGY REFRESH POLICY:**

Technology advances so rapidly that computer equipment is becoming obsolete in two to three years. Software titles often drive this obsolescence, which results when manufacturers continue to upgrade and create newer software titles, requiring greater computing resources that older computers can no longer support. At this point, older computers technologies can actually be detrimental to the curriculum and administrative environments, as they can hinder learning and office operations with this obsolescence.

### **Recommended Districtwide Technology Refresh Policy:**

- Every computer, server, and printer should be replaced every 4 years from the date of purchase. This is a significant financial commitment and thus it is vital that all stakeholders consider this process critically and the impact to the entire District if the equipment is not replaced.
- Allocate funding to replace 25% of the technology devices on an annual basis.
- Create a master Refresh Inventory-Aging list of all computers, servers, and printers within the District. Indicate which units would be replaced on an annual basis.
- Computers older than 4 years will be repurposed for other uses and receive minimal service, requiring no costs. If units require costs to repair, they will be disposed of or used as parts for other systems.
- Technology Services will oversee all technology purchases and units being refreshed.

## **TECHNICAL SUPPORT OF HARDWARE AND SOFTWARE:**

### **Technical Support**

Technology Services responsibilities includes all aspects of technology throughout the entire District, including:

- Computer hardware and software on all workstations and servers
- Maintaining local and wide area networks
- Assisting with planning and implementation of technology related aspects of school site technology procurements, upgrades, modernization, and expansion projects
- Maintaining network security, firewall protection, district-wide backups, virus protection, and Internet filtering services
- Managing telephone system and voice-mail for improved communication staff, parents, and the community
- Overseeing the District's Internet and intranet Web sites
- Work with schools sites to plan technology purchases and review the sites current systems.
- Make recommendations where appropriate.

### **Life Expectancy**

Experience has shown that the optimal life expectancy of a computer system is approximately four years, with support limited by the availability of parts and software. Systems can last longer, but generally are obsolete causing upgrades and newer software to become difficult or impossible to obtain and support.

## **TECHNOLOGY SUPPORTING GUIDELINES:**

1. Hardware – Any computer related equipment, regardless of the unit's age, will be classified as Non-Repairable, if
  - a. Parts are no longer available or
  - b. If the total history of repair costs exceeds 50% of its current value.

The value of technology equipment is determined by the following half-life formula:

- a. Each year the value of the equipment is depreciated by 50% of the previous year's value. At the end of the fourth year, the value is zero.
- c. Software – The life expectancy of software is determined by three factors:
  - a. Supporting hardware
  - b. Manufacturers support or Manufacturers End-Of-Life (EOL) date
  - c. Industry obsolescence

When software reaches any of these limitations, the District will no longer support that software or version.

## **LEVELS OF SUPPORT:**

1. **SUPPORT LEVEL I** – The following chart details equipment supported by the District and equipment that the site will support. Items not listed below will be evaluated on a case-by-case basis. Typically, disposable items such as keyboards and mice, are not supported unless under warranty. All repairs are subject to the Non-Repairable Equipment section below.

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## SUPPORTED EQUIPMENT (as of January 2018)

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### District Supported Equipment

### Site-Supported Equipment

Items under warranty—supported by the vendor with assistance from the Technology Services Department

- Local Area Network (LAN) Core Infrastructure Equipment
- Laser Printers
- Servers
- Workstations meeting District Minimum Equipment Standards
- Keyboards and Mice
- Inkjet printers
- Monitors (defective unit will be exchanged with a donated unit, if available)
- Optical Scanners
- Network Hubs
- UPS units (Uninterruptible Power Supplies)
- Site networking equipment

2. **SUPPORT LEVEL II** – Minimally Supported Equipment – Equipment that has reached the end of its Life Expectancy will receive minimal District technical support and no funds will be used to repair the equipment. Units requiring parts or extensive support to repair the equipment will be disposed of or used as parts. Any repairs requiring extensive support warrant replacement of the unit at the sites expense.

**The following list details minimum supported computers and related capabilities, which is updated on an annual basis.**

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## MINIMUM COMPUTER EQUIPMENT (as of January 2018)

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### Hardware

Intel Core i5, 2 GHz, 4 GB RAM

### Sample Programs Supported

Windows 7, 10, Office 2016

Mac OS Sierra

### **Non-Repairable Equipment**

If the total history of repair costs of the equipment exceeds 50% of its current value, then the unit will not be repaired, unless the site wishes to fully fund the repair.

### **Donated Equipment**

All donated equipment must be approved by Technology Services prior to being accepted and must meet the Minimum Computer Equipment standards above (**unless specified otherwise**). Any school site or department receiving donated equipment must purchase the appropriate software licenses, including MS Office and Antivirus applications. Any existing software must be removed and only District owned software would be installed. Donated equipment will only receive Support Level II service.

**5b. List of clear benchmarks and a timeline for obtaining the hardware, infrastructure, learning resources and technical support required to support the other plan components.**

In order to meet the five Districtwide Technology Needs, the District has established eight goals. The present budget situation is conservative, but anticipated funding will assist with the implementation of this section.

## **6. MONITORING AND EVALUATION**

### **How the Technology needs and advancements will be Monitored and Evaluated.**

The Technology Committee will be meeting on an ongoing basis, to review the progress made on the Technology Plan, and what next steps will be taken.

- Annually, an Assessment Survey tool will be offered at the introductory staff development. This will allow a regular update on the progress of individual learning for instructors, and ensure that new instructors are measured for technological staff development needs.
- Student GPAs and Statewide testing scores will be obtained annually to ensure academic achievement, and compared to prior year scores to determine value of courses and technology in increasing GPAs.

In addition, members of the Technology Committee will be regularly attending educational and industry-specific conferences that will keep them updated on statewide advancements in technology and technology training. This will enable the instructional staff to develop revised coursework that incorporates advancements, and to initiate staff developments to train on all new technology and technological developments.