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**Appendix**
The state of Texas is faced with the problem of a shortage of certified school teachers. This shortage is state-wide and is predicted to increase over the next ten years. As one measure to fill teacher vacancies, schools employ teachers who have earned the bachelor’s degree but have not completed a teacher certification program. These teachers face barriers, including time and distance constraints, that prevent them from completing higher-education coursework necessary to become certified. Teachers in this situation have limits in time flexibility because of their employment schedules that often are not conducive to taking higher-education coursework. Employed teachers who must teach during the day, are often unable to leave school in time to travel the distances necessary to arrive at the higher-education institution in time to attend the class being taught.

Distance education provides a solution to address this problem, however, traditional distance education solutions are not adequate. Traditional distance education solutions, including two-way interactive video systems, are problematic in that they are extremely expensive to purchase, operate and maintain. In addition, they are unable to provide the flexibility necessary to overcome the time and distance constraints of teachers needing the certification coursework. In other words, teachers wanting to take advantage of this technology must travel to a specific location at a specific time in order to participate.

Stephen F. Austin State University (SFASU) has formed a collaborative with eleven, TIF-eligible independent school districts (ISD’s), the Texas Teacher Certification Collaborative (TTCC), to develop and deliver higher education coursework through asynchronous distance education technologies toward the completion of teacher certification requirements. Of these 11 ISD’s, 8 have signed an Interlocal Collaborative Agreement to apply for the TIFB DI4 Discovery Grant for Higher Education Distance Learning to fund a project that will specifically address this problem. Utilizing cutting-edge, web-based technologies, the purpose of this project is to establish a model
delivery system for distance education in higher education that provides a cost efficient and pedagogically sound solution to address the statewide teacher shortage.

The purpose of the project will be accomplished by the achievement of the following three goals:

**Goal 1.** University instructors will develop and deliver high-quality, pedagogically sound, web-based courses.

**Goal 2.** Through an adequate infrastructure, the University will deliver, manage and support web-based course development and delivery.

**Goal 3.** Teachers needing certification will access web-based courses for the completion of teacher certification requirements.

Objectives tied to the project goals are described in detail on Form 10 of this proposal.

The expected outcomes of this project include the following:

- A successful, replicable model for delivering teacher certification programs via the Internet;
- University instructors who are better equipped to develop and deliver web-based courses;
- An improved technical infrastructure for providing support for higher-education instructors and students participating in web-based courses; and
- An increase in the number of certified teachers in Texas.
Statement of goals, purpose, and philosophy.  The vision which drives this project is a vision shared by all Texans, namely to ensure that the children of Texas have the very best teachers possible. If the state of Texas is to continue as a leader in excellence, it must provide the very best in educational opportunities for its school children. These opportunities are only possible when the children in our Texas school systems have teachers who have met the rigorous standards of Texas teacher certification requirements. Given this vision, it is the goal of this project to put in place a mechanism that will result in an increase in the number of certified teachers in Texas.

One of the barriers to teachers and potential teachers, in acquiring certification is the inaccessibility of teacher certification courses offered by institutions of higher education. Distance education solutions are considered a solution to problems of accessibility because they overcome the barrier of distance—bringing the instruction to where the students are. Traditionally, two-way interactive television (ITV) systems have been used as a vehicle to overcome the barrier of distance. These systems have been effective in situations where real-time video was essential to the learning experience. However, in addition to high initial costs to install the systems, use of the systems also requires the expense of high-bandwidth communication links such as leased lines. High cost and inflexibility prohibit the use of ITV systems as a solution to the problem identified in this proposal.

In addition to their high expense, ITV systems are not adequate to overcome all of the barriers associated with accessibility issues. The type of student who typically accesses and benefits from distance education solutions has unique needs. Typically, they are non-traditional students, older than the typical campus-based student, and chose distance education solutions because they have other life obligations, such as full-time jobs and family responsibilities. The students targeted by this project fit this profile. This target population of this project is persons who have a bachelor’s degree and are employed in ISD’s under temporary teacher certification plans and are not certified. The State Board for Educator Certification recently adopted new guidelines for a “Transitional Certificate” for teachers in this post-baccalaureate category. For such teachers,
distance is only one of the factors leading to the inaccessibility of teacher certification courses by those wishing to become certified—time is another key factor. Both traditional campus-based courses and courses delivered using two-way interactive television present not only the barrier of location but also of time. Higher education students wishing to take campus-based or ITV courses must still travel to a certain location at a certain time. Even if a teacher is able to travel to the location of an ITV system, other realities of life, such as work, family, and transportation issues provide additional accessibility constraints. Teachers requiring a specific course to complete certification requirements may not be able to take an ITV course at the time it is offered. Taking teachers out of the classroom so that they may attend an ITV course is not practical.

This project will implement cutting-edge distance education technology to provide a low-cost, highly flexible solution to the identified problem. Using asynchronous web-based technology, SFASU will deliver for-credit, college programs and courses to meet the requirements of teacher certification. Jim Nelson, Commissioner of Education, recently stated,

“In this period of teacher shortage, it is critical that we create new mechanisms for attracting and preparing both the traditional and the nontraditional teacher education student. That means that teacher preparation programs must accommodate special schedule and location needs of students, although neither coincide with the typical campus-based program routines. Web-based distance education accomplishes this objective.”

The TTCC proposes to develop a cutting-edge model for using web-based course delivery to address both the problem of the state-wide teacher shortage and the limitations of traditional ITV distance education technologies.

This project proposes a solution that is highly innovative in the following ways:

- It is based on widespread and widely available Internet access instead of limited locations supported by expensive lease lines.
- It utilizes affordable computer technology instead of expensive ITV systems.
- It overcomes the barrier of distance and time constraints.
- It builds upon existing TIFB investments in networking and computing infrastructure.
- It is based on a model that is easily expandable and scalable.

This proposal should be supported instead of other solutions because it will provide a model for distance education that is affordable, easily expandable, highly accessible, and pedagogically sound, and which successfully addresses a serious problem affecting the entire state of Texas. This
proposal should be supported in full by the Telecommunications Infrastructure Board because it creates a new mechanism for attracting and preparing teacher education students by accommodating the special schedule and location needs of students.

SFASU is applying for the TIFB DI4 Discovery Grant funding in collaboration with 8 ISDs. The role of SFASU will be to develop, deliver and support web-based courses leading toward teacher certification. To ensure equal access for all teachers needing certification, the University will issue laptop computers to higher-education students who are employed in an ISD and who are enrolled in the University teacher certification program. The higher education students will use the laptops at various times of the day according to their schedules and in a variety of possible settings including their homes, libraries, occasional visits to the university campus, and the ISD where they are employed. Many of the instructional activities required in a web-based course can be performed using the telecommunications bandwidth that is commonly available from modem access. However, some of the cutting-edge, instructional multimedia material that will be delivered over the Internet as a part of this project will require high-capacity bandwidth such as that available on a school network. The role of the ISD’s is to provide access to their school network for connectivity for this purpose. Use of the school networks for this purpose builds on the investment that the TIFB has already put into school systems to build their telecommunications infrastructure. As members of the collaborative, ISD’s have agreed to contribute to the collaborative project effort in this role.

Computers and technology components purchased with funds from this grant will be dedicated for use by higher education teacher certification students participating in this project.

The computers will NOT be used by the general teacher or student population of the school where the teacher is employed.

A needs assessment was performed by the collaborative and integrated into the design of the project. A survey was sent to each of the collaborative ISD’s in order to identify current needs regarding technology and teacher certification. Data returned from the survey show a strong need for the proposed project. The school districts estimated that they lose 75 teachers each year because the teachers were unable to complete the certification requirements necessary to remain employed. Personnel directors in the ISDs were asked how many teachers in their district were currently seeking certification. Districts identified approximately 164 teachers in grades K-8
currently seeking certification. Needs also existed in the upper grade levels. Data from the surveys showed that the greatest barriers to teachers completing certification requirements included incompatible course schedules, a lack of time to travel the distance to classes, and conflicting family obligations. The ISDs estimated that 112 teachers from their districts would take advantage of web-based initial certification courses if they were available. If this data were to be expanded to the whole state of Texas, it is possible to estimate that more than 10,000 teachers would use web-based education to complete their certification requirements. Survey data also indicated that ISD’s have networks in place to support connectivity but that computers are not available to dedicate to teachers for the purpose of completing certification coursework. Finally, the ISD’s indicated that laptop computers would meet the needs of these teachers better than desktop computers.

Based on this research the collaborative will, in this project, focus on the development of complete programs of for initial certification in grades K-8 and certification in Generic Special Education. Selected courses will also be developed leading to future programs in initial certification in Secondary Education and certification in various other teaching fields. The research findings were also used to determine the goals and evaluation criteria for the project as well as equipment and training needs.

The benefit to the ISDs of participating in this collaborative project is that uncertified teachers in the district will have an optional certification route that accommodates their special schedule and location needs. In addition, teachers in collaborative ISD’s will be issued a laptop computer for use during the time of their participation in the certification program. Teachers employed by ISD’s in this TTCC collaborative will be given priority access to certification course enrollment. By working together in this collaborative effort, institutions of higher education and ISDs will realize the vision of providing more certified teachers for our schools, and thereby provide teachers who are better prepared to teach the children of Texas.
The Houston Chronicle reported on July 30, 2000, that Texas had 45,000 teacher vacancies for the 2000-2001 school year. The article quoted a 1999 Texas Education Agency report that stated, "Texas is experiencing a teacher shortage that is a serious and growing problem. The shortage varies in its severity by region and by school district, but it exists in every part of the state and is deepening." In the October, 2000 meeting of the Consortium of Schools of Texas Teacher Education, Pam Tackett, Director of the State Board for Education Certification (SBEC), shared the dismal statistics reflecting the shortage of certified teachers in Texas schools. According to Tackett, Texas must supply about 70,000 certified teachers each year for the next several years in order to meet the growing demand for certified teachers. Unfortunately, however, Texas is only certifying about 14,000 teachers each year. The problem, therefore, is growing quickly and is predicted to get worse. Dawson Orr, Pampa Independent School District superintendent, was quoted in the September 26, 2000, Amarillo Business Journal, "The teacher shortage is real. We'll feel its presence in coming years."

Texas is facing the same difficulty in obtaining fully qualified special education personnel to work with children with high-incidence disabilities, particularly in rural and high poverty school districts. In a personal communication with Dr. Anna Bradfield of SFASU on May 5, 1998, Pamela Tackett of the State Board of Educator Certification reported that, “Of the total 18,365 special education teachers in Texas, 3,465 or 19% of those teachers were not fully certified, which is more than three times the national average of 6%”. Figures from the 1994-1996 Texas Comprehensive System of Personnel Development (CSPD) document teacher shortages in special education personnel. Additional personnel are needed to work with children with mental retardation, severe emotional disturbance, and learning disabilities. Generic special education was identified as the top priority for preservice training and rural areas were to be a priority when considering teacher shortages and recruiting adequate numbers of highly trained personnel (CSPD, 1994-1996, p. xi-13-17).

Through the use of cutting-edge distance education technologies, the project here proposed will directly address the teacher shortage problem.
Disparity. There is a disparity in access to teacher certification coursework among those seeking certification. Students who have adequate financial resources may not be required to work and have no barriers that prevent them from taking courses toward certification. However, those persons in a lower socio-economic status who are required to work, are being hindered from becoming teachers. The work schedule required of a teacher is a substantial barrier to attending class to complete a teacher certification program. Uncertified teachers who are in a lower socio-economic bracket often cannot afford to purchase a computer. This grant will alleviate the disparity by providing equal technology access to all. Recruitment of minority school teachers is a priority of the TTCC. Making teacher certification coursework accessible to those who have financial barriers may result in an increase in certified teachers among minorities.

One effort to address the teacher shortage problem has been to adopt the Transitional Program. This program is designed to help ISD’s fill vacant teaching positions by allowing them to hire teachers with college degrees on the condition that they become certified. This effort increases the size of the teacher pool, but has resulted in more classroom teachers requiring access to a teacher certification program. This grant proposal provides a cutting-edge solution to meet that need.

The target population of this project is teachers in ISDs whose continued employment as a teacher is contingent upon certification. These persons are familiar with the school environment, have chosen to work in this profession, and are the most likely candidates to solve the teacher shortage. However, unless they receive their certification, they will be unable to continue in the teaching profession. It is critical that barriers preventing the certification of these teachers be removed. The uncertified teachers identified as the target audience of this project are ideal candidates for web-based distance education.

Certainly, other systemic factors also have an influence on the teacher shortage situation such as legislation regarding teacher pay and benefits and local school district and campus administrative support. The problem of the growing shortage of certified teachers warrants the combined efforts of innovative solutions on all fronts. The TIF Board is in a unique position to fund efforts such as this project, that provide the technology, training, and telecommunications
infrastructure necessary to overcome many of the challenges of teachers desiring to become certified.

The problem identified by this project impacts every ISD, every school child, and every parent in the entire state. Similarly, the technical problems and challenges presented in electronically delivering course materials to those desiring to take certification coursework through distance education is felt by higher-education institutions across the state. Although the proposed project primarily targets only one region of the state, it presents a model that can be easily replicated by other institutions for other regions.

*Services that are unavailable without deploying advanced technology.* The need for a flexible distance education solution has been identified by TTCC. The ISDs have acknowledged that a teacher shortage problem exists within their district and that the distance education solution presented in this proposal will be an effective tool toward eliminating the problem. Without the deployment of these advanced technologies, a number of components of effective distance education will be unavailable. For example, this project includes the integration of cutting-edge, Internet-based, streaming video and streaming audio solutions. The use of video and audio in distance education settings is effective in promoting clear communication between students and allows the student to see demonstrations of good teaching practices, review lessons as needed, and visualize important concepts.

*Financial need.* This project will have a financial impact on each participant in the collaborative including the university, the ISDs, and the teachers. The impact on SFASU will be increased in tuition dollars generated through increased enrollment. The financial impact for the school will be in the form of less lost work time due to teachers not having to take off work to fulfill higher education course requirements. Schools will also benefit financially by not having to pay for substitutes during the teacher’s absence. The financial impact on the uncertified teachers will be a decrease in travel expenses required to access higher education teacher certification courses and a decrease in any loss of pay that may be a result of having to take off work to attend class.

The project will also have a non-financial impact on each participant. For SFASU, the impact will the development of completed programs in teacher education that can be replicated statewide, better serving the needs of higher education students. The non-financial impact for
school district partners will be an increase in the number of teachers who are certified and better prepared to teach. The impact for the teacher, who is the student of higher education, will be increased knowledge and skills related to teaching and certification which leads to job security.

**FORM 9: STATEMENT OF EXISTING CONDITIONS**

Currently at SFASU, there is a need for more technology to be put in place to address the growing need for an asynchronous solution to the teacher certification problem. The Office of Instructional Technology (OIT) has in place a gigabit connection to the campus backbone via fiber, but needs higher-capacity servers to support the proposed project. SFASU and the ISD’s also need dedicated computing resources to make the project possible.

**Project-related Personnel.** SFASU will combine its personnel and expertise with that of the ISD’s to fulfill the objectives of this project. This combination of diverse expertise will create a stable foundation to accomplish the vision of this project. The persons listed below represent the core membership of the collaborative advisory committee.

Dr. Randy McDonald, Director of the SFASU Office of Instructional Technology, will serve as the project director. Dr. McDonald has over 12 years of experience in instructional technology environments. For four years Dr. McDonald served as the Technology Specialist for the SFASU Center for Professional Development and Technology and in 1994 was named *Technology Coordinator of the Year* by the Texas Center for Education Technology (TCET). In his role as Technology Specialist, Dr. McDonald provided training for university faculty and coordinated the implementation of SFASU's first two-way interactive video network. Dr. McDonald holds a Texas teaching certificate, an M.Ed. in Secondary Education and an Ed.D. in Supervision, Curriculum and Instruction in Higher Education. Dr. McDonald has five years experience as a university faculty member where his teaching focus was in graduate and undergraduate courses in instructional technology with additional courses in pedagogy, curriculum design and distance education. Dr. McDonald has also served 4 years as the Supervisor for SFASU's Education Media Center and is currently chair of the Campus Telecommunications Advisory Committee.

Dr. Janice Pattillo is Chair of the SFASU Department of Elementary Education, former Coordinator of Early Childhood Education, and college professor for thirty years. Her areas of
specialization are early childhood education, reading and elementary education. Recently she has been involved with Nacogdoches Public Schools and the NISD/Stephen F. Austin Charter School in teacher preparation and Reading Academy grants. Dr. Pattillo’s role in the project will be to guide the development of the K-8 certification program and course content.

Dr. Anna Bradfield is Chair of the SFASU Department of Human Services which houses the Special Education programs at SFASU. Dr. Bradfield and her department faculty are actively involved in distance education including online courses. She currently is the project director for a grant from the Fund for Improvement of Post Secondary Education, Learning Anytime Anywhere Program to develop adistance education program for training teachers of children with visual impairment. Dr. Bradfield’s role in the project is to guide the development of the Generic Special Education certification program and content.

Peggy Methenia, is the Assistant to the Superintendent of the Lufkin Independent School District. Ms. Methenia has been appointed to two year term on the TEA Educational Technology Advisory Committee. She is the winner of the 1999 TeleCon International Pillar Award for "Most Outstanding Distance Learning Program" using video and a web-based training program for distance learning. Ms. Methenia has designed and implemented numerous technology projects funded by state, federal, and private foundations totaling more than $14 million in past 10 years. Ms. Methenia’s role in the current project is to provide guidance regarding the needs of the ISD partners.

The entire staff of the OIT will play a vital role in the support of this project. Key OIT staff members who will provide support for this project are:

Randy Watson, Technology Program Coordinator - Mr. Watson has more than 12 years experience in the field of media and instructional technologies. Mr. Watson has expertise in hardware specifications; procurement of hardware, software, and peripheral equipment; streaming video for web publication; management of statistical data; and maintaining inventory. Mr. Watson also directs the Faculty Development Center.

Gail Weatherly, Distance Education Coordinator - Mrs. Weatherly has more than 11 years experience in the field of instructional technology. She will complete a Master’s of Educational Technology from the University of Texas TeleCampus in December, 2001, with emphasis in
Instructional Design. She has written curriculum for training in WebCT and is currently training SFASU faculty in WebCT. Mrs. Weatherly coordinates special WebCT training events, reports to the Coordinating Board, and oversees student support services in distance education. Mrs. Weatherly will support faculty in all phases of this project.

Other personnel vital to this project include the following: Jim Egner, Media Specialist; Melanie McCuller, Media Specialist; Patti Nason, Elementary program coordinator; and Andra Floyd, Distance Education Support Specialist.

**Organization Relationships.** This project will involve the cooperation of several departments at SFASU who are focused on offering programs via Web-based instruction. These visionaries desire to offer programs to students who have time and distance barriers. This collaboration is enhanced by a newly-created task-force designed to ensure the on-going availability of on-campus services to distance education students. In addition, communication will flourish between the K-12 partners and the university, thus encouraging students in their progress toward certification.

**Facilities.** SFASU, as an Internet2® participant, as well as the ISDs’ network infrastructures will support the objectives of this grant proposal. The real need is for specific computing hardware dedicated to the certification program because current resources are not dedicated for this purpose. OIT at SFASU will serve as “ground zero” for the course delivery system servers. Accommodations in a climate controlled facility with power surge protection, security and backup have been planned for in advance. OIT also will house the training facilities in its Faculty Development Center, which are necessary for professors to create quality online instruction vital to the success of the collaborative effort.

**Technology Plan.** SFASU’s long-range technology plan includes the continued expansion of online and online-enhanced course offerings. Besides the technology to support such programs, training and faculty development to offer quality web-based instruction will continue to be expanded upon as the demand for programs like this continues to increase. University network upgrades, better student academic computing resources, enhancements to classroom technology and updated faculty and academic computing also continue to be part of SFASU’s long-range technical focus.
Current Technology Funding. SFASU currently has a budget of 3.1 million dollars for technology out of an entire operating budget of 104 million dollars.
FORM 10: PROJECT OBJECTIVES & METHODS

The project objectives are linked to the stated project goals.

Goal 1. University instructors will develop and deliver high-quality, pedagogically-sound web-based courses.

Objectives to meet Goal 1.

Objective 1.1. Provide technology tools necessary to equip instructors to develop and deliver high-quality, pedagogically-sound web-based courses. These tools will include desktop and laptop computers, software for course development and management, and video recording and editing hardware and software.

Objective 1.2. Conduct training for instructors in web-course development and delivery. This training will include required attendance in a program of 20 hours of in-class instruction addressing pedagogical and technical issues regarding web-course delivery. Additional training and support will be provided on an as-needed basis.

Objective 1.3 Instructors will develop web-based courses. Complete web-based courses will be designed and posted online for delivery. All courses will meet the standards of the Principals of Good Practice for Electronically Delivered Courses.

Objective 1.4 Instructors will deliver instruction via web-based courses. Instructors will teach the designed curriculum, give assignments, facilitate interaction, and evaluate student performance.
Goal 2. Through an adequate technical infrastructure and a well-prepared support staff, the University will deliver, manage, and support web-based courses.

Objectives to meet Goal 2.

Objective 2.1 Provide high-performance server systems and software to support the delivery of web-courses. This objective will require coordination of all computer and network components including connecting the servers and support peripherals to the University network backbone and hub for access to the Internet and server software installation and configuration.

Objective 2.2 Provide computers and software tools to monitor, manage, and support web-course delivery. These tools include the hardware and software components required of personnel in a support role including instructional designers, system administrators and program coordinators. Also included are the hardware and software components necessary to provide privacy and security for transmission of student records and data.

Objective 2.3 Provide training for staff in project support roles. Meeting this objective will include training in instructional systems design, online teaching methodologies, web-course tools software, multi-media software development, and server systems software.

Objective 2.4 Deliver and manage web-based courses for teacher certification. Courses will be scheduled, posted, and made available via the web to eligible students.

Objective 2.5 Provide continuing support for web-course students throughout course completion. Orientation for students in the use of the hardware and software tools will be provided by the University’s OIT.
Goal #3.  Higher Education students will access web-based courses for the completion of teacher certification requirements.

Objectives to meet Goal 3.

Objective 3.1  Provide computers and software tools to students enrolled in university teacher certification programs and currently employed by a school district. These tools will include laptop computers and software required to access web-course components and to facilitate student-teaching interaction. Computers and technology components purchased with funds from this grant will be dedicated for use by higher education teacher certification students participating in this project. The computers will NOT be used by the general teacher or student population of the school where the teacher is employed.

Objective 3.2  Register students into web-based courses. Course offerings and schedules will be advertised and students will be registered into teacher certification courses.

Objective 3.3  Provide orientation to teacher certification students in the utilization of web-based technologies. Orientation in the use of the hardware and software tools will be provided by the University's OIT.

Objective 3.4  Students will successfully complete courses toward certification. Students will complete web-based courses and receive credit toward the completion of certification requirements.

Objective 3.5  Students will successfully complete teacher certification requirements. Through web-based courses and other assignments, students will complete all requirements necessary for certification.
**Methods.** Project activities will take place in a logical sequence for successful implementation. The sequence of activities will include:

1. Order security enhancements for University network.
2. Order computers and software for instructors.
3. Order computers and software for support staff.
4. Order computers and software for teacher certification students.
5. Begin planning for course development.
6. Begin training for support staff.
7. Begin training for instructors.
8. Promote web-based certification program among teacher certification students.
10. Test and deliver computers and software for support staff.
11. Test and deliver computers and software for instructors.
13. Test and deliver computers and software for teacher certification students.
14. Register teacher certification students into courses.
15. Provide orientation for teacher certification students.
16. Order server systems and software.
17. Install server systems and software.
18. Deliver and support web-based courses.
19. Evaluate of web-based courses.
20. Prepare required reports.
Training Plan. Training will be provided for each of three groups:

1. Training will be conducted for project support staff. Training for support staff will be emphasized during the implementation phases of the project. Based on a train-the-trainer approach, the support staff will first receive training from outside consultants. Then, in turn, support staff will train and support faculty and students for the duration of the project and beyond. The intent of this proposal is to allocate sufficient resources and adequate time to this crucial component of the project. Training for support staff will be part of a comprehensive program leading toward instructional designer certification and WebCT trainer certification. Workshops leading toward certification as an instructional designer will include the following topics:
   - Instructional design for new designers
   - Advanced instructional design
   - Training needs analysis
   - Designing computer-based training
   - Project management for trainers
   - How adults learn
   - Instructional techniques for new instructors
   - Advanced instructional techniques

Workshops leading toward certification as a WebCT trainer will include the following topics:
   - Preparing for your first semester with WebCT
   - Communicating and Collaborating
   - Managing files and building content
   - Assessing and quizzing
   - Administering WebCT on your campus

2. Training will be conducted for faculty. Project support staff will provide training for faculty assigned to develop and deliver web-based courses. The bulk of faculty training will take place during the implementation phases of the project but will be ongoing as additional faculty are needed to develop and deliver courses to complete the teacher
certification requirements. Faculty will participate in a training program which will include 20 hours of in-class, hands-on instruction and practice in instructional design for web-based courses and the use of the web-based course development tool, WebCT. The curriculum outline of the 20-hours is as follows:

- Needs Analysis and Learner characteristics (1 hour)
- Instructional Goals and Objectives (2 hours)
- Instructional Strategies (2 hours)
- Materials and Resources (1 hour)
- Assessment (2 hours)
- Course Development (10 hours)
- Course Implementation (2 hours)

3. Training will be provided for university students enrolled in teacher certification courses. Student training will require the completion of a web-based orientation session which will include an explanation of project procedures and processes to receive technical and non-technical support.

**Technical and non-technical support.** Technical support will be specified in the RFP for hardware and software during the initial implementation and for three years following. Ongoing technical support for hardware and software systems must include onsite, telephone, and e-mail communications for service. Non-technical support will be provided in the form of consultants and information resources accessed during the training phases of the project. After receiving training, the project support staff will assume the primary role for ongoing non-technical support. The project support staff will consist of the project manager, a distance education program coordinator, a distance education support specialist, an instructional media specialist, a technology program specialist, and an instructional system administrator.

**Communication with target audience.** Electronic mail and telephone lines will be in place at each location for effective communication between instructors, students, and support staff. An online project feedback form will be used to provide information for quantitative and summative
evaluation of project activities and accomplishments. The collaborative will encourage site-based evalutations with outcomes to be shared with other members of the collaborative.

The OIT will maintain an informational web site to provide public access to general information, including course information and registration procedures, technical and non-technical support information, and email addresses and phone numbers of instructors, school contacts, and support staff. A listserv will be maintained to provide for efficient discussions among all project participants. These central communication mechanisms will provide for effective communication between the target audience and all parties associated with the project. In addition, a toll-free telephone number will be available for students to contact support staff and faculty.

**Management approach.** Project management will be directed through the guidance of an advisory committee that will oversee each component of the project. The advisory committee will consist of key personnel from each component of the project, the project director, teacher education administrators and faculty, university telecommunications and support staff, school district representatives, and higher education students participating in web-based courses. Through group decision-making, the advisory committee will serve to formulate and arrive at solutions for project operations. A second, separate listserv will be maintained to enable efficient discussion and decision-making among advisory committee members. SFASU will serve as the fiscal agent for the project. Comprehensive documentation will be maintained through the project website which will be kept up to date with information and documentation of all policies, procedures, and decisions.
FORM 11: SYSTEM, INFRASTRUCTURE AND NETWORK

System. The TTCC will utilize high-speed servers to deliver web-based instruction to students of higher education who are currently employed in Texas ISDs and seeking teacher certification. To eliminate disparity of access, laptop computers will be issued to university students enrolled in the SFASU teacher certification programs for Elementary Education and Generic Special Education. Additional computers, software and technology tools will be present at SFASU for faculty and staff involved in the design and delivery and support of these on-line course materials. Each independent school district in the collaborative will provide connectivity for the university student participants on their existing network.

Infrastructure. The OIT at SFASU utilizes a gigabit switch connected via fiber optics to the campus backbone to function as the main systems core. All other components on the network connect internally with a minimum standard of Category 5 wiring.

University’s have a responsibility to provide for the privacy of students and security of student data. To this end, this project will include an enhancement to the SFASU campus network to include a component known as a Virtual Private Network (VPN). VPNs use advanced encryption and tunneling to permit organizations to establish secure, end-to-end, private network connections over third-part networks, such as the Internet or extranets. Organizations use Virtual Private Networks (VPNs) to establish secure, end-to-end private network connections over a public networking infrastructure. VPNs have become the logical solution for remote-access connectivity for two main reasons: (1) deploying a remote-access VPN enables organizations to reduce communications expenses by leveraging the local dial-up infrastructures of Internet service providers; and (2) remote access VPNs allow students and teachers to take advantage of broadband connectivity in a secure environment. To fully realize the benefits of high-performance, remote-access VPNs, an organization must deploy a robust, highly available VPN solution, and dedicated VPN devices are optimal for this purpose.

Existing facilities of the collaborative entities vary regarding network structure. However, all members' data communications networks support TCP/IP protocol for Internet connectivity to receive on-line course material planned for this project.
Computers. Laptop computers will be issued by the university to higher education students enrolled in the university’s teacher certification program and employed by the collaborative ISDs. Through these computers, students will have access to the web-based teacher certification courses through Internet (TCP/IP) connectivity provided both modem access and by the school district’s network infrastructure. Units will also meet or exceed TIFB minimum specifications and sustain a three (3) year warranty per TIFB criterion. **Computers and technology components purchased with funds from this grant will be dedicated for use by higher education teacher certification students participating in this project. The computers will NOT be used by the general teacher or student population of the school where the teacher is employed.** The specifications per TIFB guidelines are listed below.

- Computer Pentium III, Intel Celeron, PowerPC G3, AMD K6, or Pentium equivalent operating at 450 MHz, with keyboard, monitor and mouse (iMac is an acceptable alternative).
- Memory: 64 MB (Megabytes) of memory configuration (Optional - CD-ROM: Should be a minimum of 12x speed or greater).*
- BUS/Motherboard: Supports at least 2 PCI adapter cards and/or universal serial bus (USB) technology.
- Network adapter appropriate to the LAN environment (i.e., 10/100 Ethernet adapter).
- Hard Drive size: minimum 3 GB.*
- Operating System: Windows 95, NT, Mac OS 8.1 or later.*

* Specifications will be exceeded.

Computers for faculty at SFASU will be housed primarily in the College of Education, with some portable multimedia units available for off-site course work and development. Security will be addressed for both faculty and students by recording serial numbers of each unit and then issued to individuals and departments. Students will sign a form proving receipt of the equipment and agreeing to provide reasonable care and security for all equipment. Each individual or department will be responsible for the guardianship and proper care of the system. When a student has
completes or becomes inactive in the teacher certification program, all issued equipment will be returned to the University for use by future students in the program.

**Servers.** Two web-course servers with licensed course development software and two streaming media servers will be installed on the campus of SFASU in the OIT. Course software on servers will have resident security for deterrence of external intrusion by unauthorized users. Server security will consist of built-in redundancy, alternative recorded media backup as an added level of security, and off-site backup storage and password protection giving only qualified server administrators access to the servers.

Course servers will have Internet/network (TCP/IP) connectivity. Servers will also meet or exceed TIFB minimum guidelines as listed below.

- Pentium Pro III 450MHz or equivalent performance*
- 512 KB L2 ECC cache
- 64MB memory*
- Appropriate network interface
- 4 GB SCSI hard drive*
- 12x or greater CD-ROM
- 104 key keyboard
- 3.5” disk drive
- Monitor
- Three-year on-site warranty

* Specifications will be exceeded

**Software.** Selection of course management, course development and/or other content software will be made based upon diverse needs together with security, dependability, effectiveness, institutional referrals, and ease of use. WebCT® course management software has been selected to serve as a shared web-based resource through which both faculty and students will access course materials. This course content development software will be a tool for faculty to use as a development aid that will assist in producing high-quality, multimedia instructional materials. Upon completion, the instructional material will be delivered online via the WebCT® course management system.
Software standards and specifications will include:

- Annual upgrades and support included with license renewals
- Training resources provided
- TCP/IP compatibility
- Warranty which complies with TIFB guidelines (3 year on-site)
- Scaleable options if applicable

**Scalability.** It is anticipated that this project will grow beyond its original scope to include an increased number of student participants with locations statewide. Due to the inherent flexibility in the infrastructure of the Internet, this project is very easily and inexpensively scalable, especially when compared to other distance education solutions such as two-way interactive video. The server systems used in the proposed project configuration are capable of supporting twice as many participants with no added expense. After the grant period ends and as the number of participants grows, additional student computers may be provided by university departmental budgets, state and federal grants, or the students themselves. Ongoing upgrades and license renewals will add versatility to the expected growth and success of this collaboration. The annual license renewal of course management software will ensure that a current version of the software will be in place and available for all users.

**Support.** Items purchased with TIFB funds will carry a three-year, on-site warranty plan. This will carry the program into the year 2004. A support plan is that will cover equipment after the grant period has expired is described on Form 10 of this proposal. Upgrades such as computer enhancements will be performed on an as-needed basis.

**Vendors.** Based on availability, distributors who are on the state approved merchant list will be given preference. Where bid requests are submitted, the supplier must include a detailed list of materials and total goods provided, including labor costs. New suppliers must provide a minimum of three references with contact information included. Time frames and specific date and year for the completion of services or delivery of goods must be provided also. Bids will be awarded to vendor(s) in accordance with state law and guidelines.

**Relevant Components.** Digital image manipulation software and hardware is now an integrated part of web-course development. Various training tools, media, equipment and
accessories to assist faculty with training or to serve as an aid to accomplish this mission will be required. An example of this would be training CD’s to tutor a developer on software such as Photoshop. An example of web-course development hardware would be a digital camera or an image scanner.

**Documentation.** The OIT will be responsible for maintaining a register regarding the following:

- Purchase records for purchases under TIFB
- Technical support contact information
- Software specifications
- Server (network) upgrade or development updates
- Software upgrade developments
- Contact information for all collaborative sites
- All required TIFB documentation
- TIFB inventory database
Form 12: Network Diagram

SFA Campus Network

1000 mbps

Internet 2

DS3 Circuit (45 mbps)

Houston Gigapop

Collaborative Partners

T-1 Line(s)

Service Provider(s)

Internet

1000 mbps

Gigabit Switch

Gigabit Switch

Distance Education

OIT

ISD Network

T-1 Line(s)

T-1 Line(s)

T-1 Line(s)

T-1 Line(s)

Modem Dial-up

T-1 Line(s)
This teacher certification collaborative consists of separate institutions, each of which indicate that network infrastructure and Internet connectivity bandwidth vary. All members maintain a register of existing operations and telecommunications connectivity rates, most commonly approaching T1 rates or better. This project will take advantage of the previous investments in technology by SFASU. Through a previous TIFB grant, the university network infrastructure was enhanced. However, the network is in need of security enhancements that will protect the privacy of students and their data. In addition, computers currently being used by university teaching faculty and support staff are inadequate for the cutting-edge web and video instructional materials required of this project. In response to research by the collaborative, ISDs indicated that their networks are in place and currently providing connectivity, however, the districts do not have computers at their disposal to dedicate to teachers who are needing certification.

Supplementary information regarding ISD networks and equipment were gathered by a questionnaire, which was sent to all collaborative members. Adequate bandwidth was already in place and the need focused on computers to facilitate this purpose, since other computing resources were dedicated for teacher-in-classroom instructional purposes. A partial list of qualifying technical questions were asked of potential institutions follows:

**Itemized Grant-Related Inventory Listing.**

- Cisco Gigabit Switch (connected to campus backbone)
- Web CT Server, Single Pentium PC (borrowed from existing lab)
- 9 Pentium Lab PC’s
- 4 Mac G4 Computers
- One LCD Projector
- 6 Pentium Office Computers
- 2 Digital Cameras
- 2 Video Cameras
The TTCC is aware of the great expenditures by the TIFB Board to equip ISDs with computers and infrastructure for teacher and student use. It is not the purpose of this grant to further equip those important functions. It is the purpose of this project to establish a model delivery system for distance education in higher education that provides a cutting-edge, cost efficient, and pedagogically sound solution to address the statewide teacher shortage. Although the users of the computers are in teaching positions in ISDs, they are actually students of higher education, seeking teacher certification through an institution of higher education, and therefore qualify as participants in this DI4 grant. Computers and technology components purchased with funds from this grant will be dedicated for use by higher education teacher certification students participating in this project. The computers will NOT be used by the general teacher or student population of the school where the teacher is employed.

Hardware:

(4) Computer-based Course and Media Servers

Four servers to provide a platform for faculty members to create web-based course materials for students to access via the Internet at remote sites. Two servers will serve as WebCT® course servers and two will serve as streaming media servers. Dell Computer of Austin provided price quotes. Actual purchase will be made in accordance with the state purchasing guidelines and price may vary.

<table>
<thead>
<tr>
<th>Total Costs for 4 Servers</th>
<th>$73,012.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dell Servers</td>
<td>$17,347</td>
</tr>
<tr>
<td>Pentium III, 1 Ghz</td>
<td>$17,347</td>
</tr>
<tr>
<td>2 GB Ram</td>
<td>$17,347</td>
</tr>
<tr>
<td>TCP/IP Connectivity</td>
<td>$17,347</td>
</tr>
<tr>
<td>40x CD Rom Drive</td>
<td>$17,347</td>
</tr>
<tr>
<td>40/80GB External Storage</td>
<td>$17,347</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Testing Servers</th>
<th>UPS Backups</th>
</tr>
</thead>
<tbody>
<tr>
<td>$17,347</td>
<td>$906</td>
</tr>
<tr>
<td>$17,347</td>
<td>$906</td>
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<tr>
<td>$17,347</td>
<td>$906</td>
</tr>
<tr>
<td>$17,347</td>
<td>$906</td>
</tr>
</tbody>
</table>
(14) **PC Workstations**

14 workstations for the purpose of supporting and training faculty at SFASU in the construction and administration of web-based courses. Dell Computers of Austin provided Price quotes. Actual purchase will be made in accordance with the state purchasing guidelines and price may vary.

* Dell OptiPlex GX300 MiniTower  
  * Pentium III/1Ghz  
  * 30gb Hard Drive  
  * 256mb RAM  
  * 32X CD-RW  
  * TCP/IP Connectivity  
  * Windows 2000  

Total costs for 14 workstation units at $4,696.00 each: $**65,744.00**

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(174) **Laptop Units**

174 laptop units to provide access to and construction of web-based courses delivered by above servers to collaborative members’ sites and originating from SFASU. Dell Computers of Austin provided Price quotes. Actual purchase will be made in accordance with the state purchasing guidelines and price may vary.

* Dell Inspiron 3800  
  * Pentium III/600 Mhz  
  * 10.0gb Hard Drive  
  * 128mb RAM  
  * 8X CD-RW  
  * TCP/IP Connectivity  
  * Windows 2000  

Total costs for 174 laptop units at $3,100.00 each: $**539,400.00**
(1) **PC Media Workstation**

One media workstation to be used for the creation and manipulation of digital media which will be incorporated into course web content. Dell Computers of Austin provided Price quotes. Actual purchase will be made in accordance with the state purchasing guidelines and price may vary.

Dell Precision Workstation 220 Medium Desktop
Pentium 4/1.5 Ghz
73gb Ultra SCSI Hard Drive, 9gb Ultra SCSI Hard Drive
1gb RAM
12X DVD-ROM
TCP/IP Connectivity
OS to support hardware/software

Total cost for one unit: **$8,681.00**

(1) **LCD Monitor**

18" Sony
Flat Panel Technology

Total cost for one unit: **$2,206.00**

(2) **Canon XL-1 Digital Cameras**

Firewire Compatible

For support of all media workstations

Total costs for 2 units at $3700.00 each: **$7,400.00**
(1) Mac Media Workstation

One Mac media workstation to be used for the creation and manipulation of digital media which will be incorporated into course web content. Apple Computer provided price quotes. Actual purchase will be made in accordance with the state purchasing guidelines and price may vary.

G4 Processors, Dual 500mhz
1gb RAM
20gb SCSI Drive
Zip
DVD RAM with Video
22” Cinema Display

Total cost for one unit: $16,978.00

(2) Sony Monitors

Sony 9” Color Studio Monitors
PVM-80410 or equivalent

Total costs for 2 units at $1500.00 each: $3,000.00

(2) Lowell Lighting Kit

VIP Portable Kit or Equivalent

Total costs for 2 units at $3000.00 each: $6,000.00

(2) Sony Media Converter

IEEE-1394 to Line Output/Input

Total costs for 2 units at $1000.00 each

$2,000.00
(2) Sony SVO-2000 VTR’s
  4-Head
  Hi-Fi
  Flying Erase Heads
  Precision Jog/Shuttle
  Total costs for 2 units at $1000.00 each: **$2,000.00**

(2) Bogen Tripods
  Model 3036 or Equivalent With 3063 Head
  Fluid Head
  Tilt, Pan
  Total costs for 2 units at $500.00 each: **$1,000.00**

(2) Yamaha Speaker System
  YST-MS50 or Equivalent
  Total costs for 2 units at $300.00 each: **$600.00**

(2) Ethernet Switches
  Two Ethernet switches to enhance and optimize bandwidth at the University site. Cisco Systems provided price quotes. Actual purchase will be made in accordance with the state purchasing guidelines and price may vary.
  Cisco Catalyst 3524 Switch
  10/100 Base T-TX Auto-sensing Ports
  Two Gigabit Ethernet Ports
  Switch Clustering Technology
  Total costs for 2 units at $2995.00 each: **$5,990.00**

(1) Virtual Private Network (VPN)
  Virtual Private Network Security System to ensure University responsibility is met for securing student data and personal information.
Total cost: $35,000.00

(9) Multimedia Projection Systems

Nine multimedia projection systems to support training sessions and multimedia course development in University departments providing courses leading to teacher certification. Various vendors provided price quotes. Actual purchases will be made in accordance with the state purchasing guidelines and price may vary. See information below for vendor-specific, itemized pricing and specifications.

(9) Epson PowerLite 710c Projector, vendor: PBS Systems
1000 ANSI Lumens
True 1024x768 Resolution
NTSC, PC, Mac Compatible
Total cost for 9 units at $3995.00 each: $35,955.00

(9) Sony SLVN50 VCR’s, Vendor: Circuit City
4-Head
Hi-Fi Stereo
Front A/V Inputs
Total cost for 9 units at $130.00 each: $1,170.00

(9) Heavy Duty Mobile Workstations, Vendor: e-shop4u
46” tall
8” Pneumatic Wheels
Surge Electric
Total cost for 9 units at $634.00 each: $5,706.00
(9) **Wireless RF Remotes**, Vendor: Logitech

Radio Frequency
30' Range
3-button Operation
Total cost for 9 units at $150.00 each: **$1,350.00**

(9) **Cordless Freedom Keyboards**, Vendor: Logitech

Web Wheel
Radio Frequency
Total cost for 9 units at $80.00 each: **$720.00**

(9) **Speaker Systems**, Vendor: MicroWarehouse

10 Watts
Headphone Jack
Active Servo Bass
Total cost for 9 units at $40.00 each: **$360.00**

(18) **Security Lock Cable Kits** (2 per unit), Vendor: TechSaver

Total cost for 18 units at $27.00 each: **$486.00**

Software:
**Real Server® Software**

A 100-stream license for Real Server which would allow multiple hits on the media server housed in the OIT. Price quote was provided by Real.com. Actual purchase will be made in accordance with the state purchasing guidelines and price may vary.

Real Server Software (200 user license).

$8,393.00

**Real Producer Plus®**

Encoding software which allows digital content to be processed before being fed into a server. Price quote was provided by Real.com. Actual purchase will be made in accordance with the state purchasing guidelines and price may vary.

Real Producer Plus

$150.00

**DVD-2000 Software**

DVD-2000 software will be used on the Dell Precision Workstation and is for the purpose of editing and manipulating digital media. Price quote was provided by Pinnacle Systems. Actual purchase will be made in accordance with the state purchasing guidelines and price may vary.

DVD-2000 Software

$8,994.00

*Note: All other necessary base software, including virus-scan, is included with the purchase of workstations and laptops from Dell.*
FORM 15: SUSTAINABILITY/SECURING FUNDING

This project has been planned with the expectation of long-term sustainability. Because this project uses existing Internet connectivity managed by the University, there are no ongoing lease line charges as with ITV systems. It is projected that operating expenses during the year after the completion of TIFB funding will be minimal. Server and computer systems used in this project will be operational for at least three years after the completion of TIFB funding. Additional courses and certificate programs will be able to take advantage of equipment purchased through this grant with no added cost. WebCT licensing will continue to be renewed at an approximate cost of $4,000.00 per year. Support staff will be deployed to troubleshoot equipment problems not covered by the warranty.

Cost-effective implementation. Steps will be taken to employ cost-effective project procedures. When appropriate, existing resources and equipment will be used to allow for cost-savings. For example, during the beginning stages of the project, existing server and support equipment will be utilized. As the project outgrows existing computer capabilities, grant funds will be used to purchase equipment that will sustain the project far into the future. Cost-effective measures will be implemented and will include the following:

1. Existing training and networking facilities will be used to support the server equipment, training equipment, and web media development.
2. Support staff will attend training in groups and attend workshops in successive days in the same location in order to minimize travel costs.
3. Project purchases will take advantage of existing university discount agreements.
4. System testing and installation will be conducted by project support staff and collaborative personnel.
5. Similar systems will be ordered in quantity to reduce pricing and shipping charges.

Future plans for the Project. This project is designed for long-term and ongoing sustainability. At the conclusion of TIF funding, the project will be fully implemented. The project will be poised for expansion of certification programs and duplication of the model by other
entities. The continuing objectives and methods for expansion of the project and for maintaining
and ensuring the project is operational in the long-term include the following:

- Provide technology tools necessary to equip faculty to develop web-based courses.
- Conduct training for instructors in web-course development and delivery.
- Instructors will develop web-based courses.
- Instructors will deliver instruction via web-based courses.
- Deliver and manage web-based courses for teacher certification.
- Provide continuing support for web-course students through course completion.
- Allow teachers seeking certification access to computers and software tools.
- Register students into web-based courses.
- Provide orientation to teacher certification students in the utilization of web-based
technologies.
- Students will successfully complete courses toward certification.
- Students will successfully complete teacher certification requirements.
- Incorporate ongoing evaluation results into project improvement.

**Sources of Revenue.** SFASU will provide all cash matching funds equaling over 15% of
all funds requested from the TIFB. Future funding for this project will be secured and sustained
through regular university budget funds of participating departments complimented by special
university budget allocations and state and federal grants.
### FORM 16: PROJECT TIMELINE

<table>
<thead>
<tr>
<th>Year 2001</th>
<th>Action Items and Resources</th>
</tr>
</thead>
</table>
| **May 5** | Grant accounting initiated at Stephen F. Austin State University. Establish listserv for entire Collaborative and Advisory committee. Collaborative Web master appointed to maintain Web site for collaborative activities.  
  *Required resources: Forms for Business Office; Email to listserv; Web master.* |
| **May 15** | Collaborative Web site established as a resource to information and project status.  
  *Required resources: Web master to FTP Web pages to server, maintain pages, publicize URL.* |
| **May 15 – February, 2002** | Training for support staff.  
  *Required resources: Training manuals, Faculty Development Center, Training Staff.* |
| **May 31** | Order enhancements for University network security. Order instructor equipment and software. Order support staff equipment. Order student equipment. Order video server system.  
  *Required resources: Server administrator, administrative assistant.* |
  *Required resources: Support Staff, Instructors.* |
| **June 1 – Oct. 31, 2002** | Provide course development training for instructors.  
  *Required resources: Faculty Development Center, Support Staff.* |
| **June 1 – July 31** | Install University network security enhancements.  
  *Required resources: Technology Program Coord.* |
| **July 31** | Test workstations/software for support staff.  
  *Required resources: Technology Program Coord.* |
| **July – August** | Test workstations/software for instructors.  
  *Required resources: Technology Program Coord.* |
| **July 31** | Test and issue laptops to students.  
  *Required resources: Technology Program Coord.* |
| **July 31** | Objective 2.2 will be met by this date. Provide tools for support staff.  
  **September 1** | Objective 1.1 will be met by this date. Provide tools for web-based courses.  
  **October 31** | Objective 2.1 will be met by this date. Provide systems for web-based courses. Objective 3.1 will be met by this date. Provide tools to students. Objective 3.2 will be met by this date. Provide registration for students. Objective 3.3 will be met by this date. Provide orientation for students. |
Timeline continued.

<table>
<thead>
<tr>
<th>Year 2002</th>
<th>Action Items and Resources</th>
</tr>
</thead>
</table>
| **February 28** | Objective 1.4 will be met by this date. Instructors will deliver web-based courses.  
Objective 2.3 will be met by this date. Provide training for support staff.  
Objective 2.4 will be met by this date. Deliver web-based courses.  
Objective 3.4 will be met by this date. Students will complete courses. |
| TBA by TIFB | Financial reports to TIFB. |
| January 1 – December 31 | Course development, delivery and support ongoing. |
| **September 1** | Objective 1.2 will be met by this date. Conduct training for instructors.  
Objective 1.3 will be met by this date. Instructors will develop web-based courses.  
Objective 3.5 will be met by this date. Students will complete certification. |
| **December 31** | Objective 2.5 will be met by this date. Provide support for web-course students. |
| TBA by TIFB | Financial reports submitted to TIFB. |
| TBA by TIFB | Interim progress report submitted to TIFB. |

<table>
<thead>
<tr>
<th>Year 2003</th>
<th>Action Items and Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBA by TIFB</td>
<td>Financial reports submitted to TIFB.</td>
</tr>
<tr>
<td>TBA by TIFB</td>
<td>Progress reports submitted to TIFB.</td>
</tr>
<tr>
<td><strong>February 28</strong></td>
<td>Grant ends.</td>
</tr>
<tr>
<td>TBA by TIFB</td>
<td>Final program progress report submitted to TIFB.</td>
</tr>
<tr>
<td>TBA by TIFB</td>
<td>Final financial report submitted to TIFB.</td>
</tr>
</tbody>
</table>
Evaluations will be conducted and data used to improve the project as it progresses toward the planned objectives. The project director, through the SFASU OIT, will be responsible for conducting the evaluation plan.

Throughout the life of the project, both paper copies and electronic templates of survey instruments will be used to gather quantitative data from students, faculty, school district administrators, and project support staff. Also, focus groups will be conducted to gather qualitative data. The designated school district contact will be responsible for submitting field data to the collaborative advisory committee, who will assess the project’s progress and determine if it is leading to the desired outcomes. In addition, the advisory committee will consult with the SFASU Office of Institutional Research to assure that effective analyses of the data are performed.

Evaluation of this project will be cost effective due to most of the evaluation data being collected through electronic means. Existing support staff will be used to collect data and advisory committee personnel will analyze the data. Results of the analysis will be used to adjust the project procedures to achieve maximum benefit to all participants.

One of the major criteria for evaluation of this project will be the number of teachers certified through this program. The baseline for this evaluation is zero, since, to date, there have been no students at SFASU complete a program of teacher certification through web-based courses. By the end of the grant period, it is expected that 75 students will have completed initial certification requirements and 20 will have completed requirements for Generic Special Education certification. Many more students will be in the process and nearing completion of certification requirements.

The evaluation plan will be based on the stated objectives of the project proposal. The table on the following page defines the evaluation criteria as they relate to the stated objectives. In addition to the evaluation criteria listed on the following page, the timeline of will be evaluated. Required data will be reported to the TIFB as requested and will be posted on the collaborative web site for dissemination. This data will be used to determine how well the project objectives are being achieved and to make decisions regarding appropriate actions or adjustments to be taken.
<table>
<thead>
<tr>
<th>Objectives</th>
<th>Evaluation Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective 1.1 Provide technology tools necessary to equip faculty to develop and deliver high-quality, pedagogically-sound web-based courses.</td>
<td>All instructors involved in the project will have direct access to state-of-the-art computers and related peripherals.</td>
</tr>
<tr>
<td>Objective 1.2 Conduct training for instructors in web-course development and delivery.</td>
<td>Documented attendance for 20 hours of workshop instruction.</td>
</tr>
<tr>
<td>Objective 1.3 Instructors will develop web-based courses.</td>
<td>Review of course by advisory committee and signed form documenting course completion according to Principals of Good Practice.</td>
</tr>
<tr>
<td>Objective 1.4 Instructors will deliver instruction via web-based courses.</td>
<td>A minimum of 15 Web-based courses will be offered and delivered.</td>
</tr>
<tr>
<td>Objective 2.1 Provide high-performance server systems and software to support the delivery of Web-based courses.</td>
<td>2 web-course servers and 2 streaming media servers will be provided with applicable software.</td>
</tr>
<tr>
<td>Objective 2.2 Provide computers and software tools to monitor, manage, and support web-course delivery.</td>
<td>Each support staff member will be equipped with adequate computers and tools to provide sufficient support.</td>
</tr>
<tr>
<td>Objective 2.3 Provide training for staff in project support roles.</td>
<td>Eight members of the support staff will achieve certification as a Certified Instructional Designer and Certified WebCT Trainer.</td>
</tr>
<tr>
<td>Objective 2.4 Deliver and manage Web-based courses for teacher certification.</td>
<td>Courses will be posted on the University Web servers and managed as delivered. Evaluations will collect data that the advisory committee will use to monitor student satisfaction with the program and suggest adjustments as needed.</td>
</tr>
<tr>
<td>Objective 2.5 Provide continuing support for Web-course students throughout course completion.</td>
<td>An evaluation will contain questions regarding student and instructor satisfaction with support services.</td>
</tr>
<tr>
<td>Objective 3.1 Provide computers and software tools to students enrolled in university teacher certification programs and currently employed by a school district.</td>
<td>Students in the certification program will describe in an evaluation instrument the value of the hardware and software for receiving the Web-based courses.</td>
</tr>
<tr>
<td>Objective 3.2 Register students into Web-based courses.</td>
<td>Students will contact through the Office of Instructional Technology during registration. Class rosters will verify student numbers.</td>
</tr>
<tr>
<td>Objective 3.3 Provide orientation to teacher certification students in the utilization of Web-based technologies.</td>
<td>Orientation will be provided for students enrolled in the program. Participation and satisfaction with orientation will be measured.</td>
</tr>
<tr>
<td>Objective 3.4 Students will successfully complete courses toward certification.</td>
<td>By January, 2003 125 teachers will have completed coursework toward initial certification. By January, 2003, 30 teachers will have complete coursework toward Gen. Special Education cert.</td>
</tr>
<tr>
<td>Objective 3.5 Students will successfully complete teacher certification requirements.</td>
<td>By January, 2003 75 teachers will have completed initial certification requirements. By January, 2003, 20 teachers will have complete Gen. Special Education certification requirements.</td>
</tr>
</tbody>
</table>
**Managing financial records for the grant.** All grant accounting will be handled through the Controllers Office of SFASU, which will monitor grant expenditures, prepare billing statements for reimbursement from TIFB, and prepare timely financial status reports. The Controllers Office will also document the expenditure of matching funds.

**Cost-effectiveness.** The cost-effectiveness of this grant is enhanced in multiple ways. The project builds on previous TIFB investments in networking infrastructure both in the university and in the partners ISD. Grant management will be performed by existing personnel at no expense to the collaborative. The university is providing over 15% in matching funds toward this project.

SFASU will be the fiscal agent for the project. No funds or property of any kind will be exchanged between the university and the partner ISD’s. All funds will go to SFASU and all items purchased with TIFB funds will remain the property of SFASU. Therefore, the collaborative was advised by the TIFB representative that budget forms from the ISD were not applicable or necessary to this project design and grant application.

**Funds from other sources used with grant funds.** During and after the TIFB funding period, SFASU will provide funding to support this project from other sources. The departmental budgets of the Office of Instructional Technology, the Department of Elementary Education, the Department of Human Services will be used to provide supplementary and ongoing funding. In addition, after the grant period, additional funds may be sought from special university allocations and state and federal grants.
**FORM 19: BUDGET SUMMARY**

**Applicant Name:** Stephen F. Austin State University (Texas Teacher Certification Collaborative)

<table>
<thead>
<tr>
<th>BUDGET SCHEDULE</th>
<th>TIFB Funds</th>
<th>Local Funds*</th>
<th>In-Kind*</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td>$68,000.00</td>
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<td>$68,000.00</td>
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<td>B. Contractual Services</td>
<td>$42,200.00</td>
<td>$7,100.00</td>
<td></td>
<td>$49,300.00</td>
</tr>
<tr>
<td>C. Travel</td>
<td>$15,000.00</td>
<td>$3,520.00</td>
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<td>$18,520.00</td>
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<tr>
<td>D. Supplies and Materials</td>
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<td>$22,997.00</td>
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<tr>
<td>E. Equipment</td>
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<td><strong>$973,575.00</strong></td>
</tr>
</tbody>
</table>

**Program Income** (if known) 

**NOTE:** TIFB Funds should contain **Direct Costs** only. No indirect costs can be included.

I approve the budget for this project and agree to abide by all financial guidelines.

Dora Fuselier  
Controller

Roland Smith  
Interim President

Date  
Date
SCHEDULE A – PERSONNEL

Applicant Name: Stephen F. Austin State University (Texas Teacher Certification Collaborative)

<table>
<thead>
<tr>
<th>Type of Expense</th>
<th>Quantity/ Duration</th>
<th>TIFB Funds</th>
<th>Local Funds</th>
<th>In-Kind</th>
<th>Total</th>
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<td>$68,000.00</td>
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<tr>
<td>b.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Direct Expense</strong></td>
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<td>$0.00</td>
<td>$68,000.00</td>
<td>$0.00</td>
<td>$68,000.00</td>
</tr>
</tbody>
</table>

I approve the budget for this project and agree to abide by all financial guidelines.

Dora Fuselier
Controller

Roland Smith
Interim President

Date

Date
The workload required to attend training, and to develop and deliver online instructional materials merits stipends. University faculty will receive stipends from local funds for attending training and delivering online courses associated with this project.

OIT will pay faculty a $1,000 stipend to develop an online course and a $1,000 stipend each time the course is delivered. The budgeted amounts are calculated as follows:

**Generic Special Education**
- Course Development – 7 courses @ $1,000/each $7,000
- Course Delivery – 25 courses @ $1,000/each $25,000

**Elementary Education**
- Course Development – 8 courses @ $1,000/each $8,000
- Course Delivery – 28 courses @ $1,000/each $28,000

Total Faculty Stipends $68,000
## SCHEDULE B – CONTRACTUAL SERVICES

**Applicant Name:** Stephen F. Austin State University (Texas Teacher Certification Collaborative)

<table>
<thead>
<tr>
<th>Type of Expense</th>
<th>Quantity/Duration</th>
<th>TIFB Funds</th>
<th>Local Funds</th>
<th>In-Kind</th>
<th>Total</th>
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<tr>
<td>a.</td>
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<td>$0.00</td>
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</tr>
<tr>
<td>b.</td>
<td></td>
<td></td>
<td></td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>c.</td>
<td></td>
<td></td>
<td></td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>d.</td>
<td></td>
<td></td>
<td></td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>e.</td>
<td></td>
<td></td>
<td></td>
<td>$0.00</td>
<td>$0.00</td>
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<td>$0.00</td>
<td>$0.00</td>
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<td><strong>Section 2: Project Management</strong></td>
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</tr>
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<td>a. Project Design/Management</td>
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<td>$0.00</td>
</tr>
<tr>
<td>b.</td>
<td></td>
<td></td>
<td></td>
<td>$0.00</td>
<td>$0.00</td>
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<tr>
<td>c.</td>
<td></td>
<td></td>
<td></td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>d.</td>
<td></td>
<td></td>
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<td>$0.00</td>
<td>$0.00</td>
</tr>
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<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
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<td><strong>Section 3: Training</strong></td>
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<td>$26,400.00</td>
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<td>b. WebCT Trainer certification</td>
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<td>$18,800.00</td>
<td>$4,100.00</td>
<td>$22,900.00</td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td></td>
<td></td>
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<td>$49,300.00</td>
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<td>$7,100.00</td>
<td>$0.00</td>
<td>$49,300.00</td>
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<tr>
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<td>$42,200.00</td>
<td>$7,100.00</td>
<td>$0.00</td>
<td>$49,300.00</td>
</tr>
</tbody>
</table>

I approve the budget for this project and agree to abide by all financial guidelines.

Dora Fuselier, Controller

Roland Smith, Interim President

Date

Date
Training for support staff is critical to the success of this project. Eight persons have been selected to receive training and certification in Instructional Design and WebCT training. These eight persons will, in turn, provide training, consultation, and support for faculty participating in web-course design and delivery.

**Instructional Design Certification** – The Langevin Learning Services will be utilized for this certification, and the budget amount of $26,400 reflects the estimated cost for 8 persons @ $3,300/each. Langevin certification is based on the competencies recommended by the International Board of Standards for Training, Performance and Instruction, and is the world’s largest train-the-trainer company. OIT project staff will attend the 6-day (Monday to Saturday) Accelerated Certification Program workshop and will achieve Professional Certification. The training qualifies for 4.2 CEU’s.

**WebCT Certification** – The certification process requirements and timeline are:

- Pass the WebCT Knowledge Test (WKT) – one week
- Complete the Train-the-Trainer workshop – three weeks
- Evaluation by a WebCT Master Trainer – within 6 months of completing the Train-the-Trainer workshop, conduct an introductory WebCT training and be evaluated

The following WebCT workshops have been identified as required for project staff, and the budget amount of $18,800 is for 8 persons @ $2,350/each:

- Assessment and Quizzing in WebCT 3.0 (1 day)
- Building, Managing, and Presenting Content in WebCT 3.0 (1 day)
- Communicating and Collaborating with WebCT 3.0 (1 day)
- Administering WebCT (1 day)
- Trainer Training (2 days)
SCHEDULE C – TRAVEL

APPLICANT NAME: Stephen F. Austin State University (Texas Teacher Certification Collaborative)

<table>
<thead>
<tr>
<th>Type of Expense</th>
<th>TIFB Funds</th>
<th>Local Funds</th>
<th>In-Kind</th>
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<td>b. Lodging</td>
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<td>c. Meals</td>
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<td>$3,520.00</td>
<td>$18,520.00</td>
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</tr>
</tbody>
</table>

I approve the budget for this project and agree to abide by all financial guidelines.

___________________________________ _____________________________
Dora Fuselier Roland Smith
Controller Interim President

___________________________________  _____________________________
Date Date
Travel is required for 8 OIT project staff to receive training as follows:

**Instructional Designer Certification - Langevin Learning Systems**
(one 6-day workshop/7 days of travel) - $9,320

- Transportation: 8 persons @ $500/each - $4,000
- Lodging: 8 persons @ 7 nights @ $70/night - $3,920
- Meals: 8 persons @ 7 days @ $25/day - $1,400

**WebCT Certification**
(Four 1-day workshops and one 2-day workshop/10 days of travel) - $9,200

- Transportation: 8 persons @ $200/each - $1,600
- Lodging: 8 persons @ 10 nights @ $70/night - $5,600
- Meals: 8 persons @ 10 days @ $25/day - $2,000

All travel is subject to the state of Texas guidelines for travel and reimbursement rates.
## SCHEDULE D – SUPPLIES & MATERIALS

**APPLICANT NAME:** Stephen F. Austin State University (Texas Teacher Certification Collaborative)

<table>
<thead>
<tr>
<th>Type of Expense</th>
<th>Quantity</th>
<th>TIFB Funds</th>
<th>Local Funds</th>
<th>In-Kind</th>
<th>Total</th>
</tr>
</thead>
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<td><strong>Section 1: Software</strong></td>
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<td>a. WebcCT</td>
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<tr>
<td>d. DVD-2000</td>
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<td><strong>Section 2: Other</strong></td>
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</tr>
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<td>a. KVM Switch</td>
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<td>$900.00</td>
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<td><strong>SECTION 1 + 2 =</strong></td>
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</tbody>
</table>

Note: Using the Justification Attachment form, justify and briefly describe the basis for arriving at the cost of each line item. See Section 4, Page 3 of the Application Guide for additional information.

I approve the budget for this project and agree to abide by all financial guidelines.

Dora Fuselier  
Controller  
Date

Roland Smith  
Interim President  
Date
Stephen F. Austin State plans to purchase a KVM switch and accompanying cables to facilitate management of distance education servers. This cost was arrived at by pricing the product through vendor websites.
# SCHEDULE E – EQUIPMENT / FIXED ASSETS (SUMMARY)

**APPLICANT NAME:** Stephen F. Austin State University (Texas Teacher Certification Collaborative)

<table>
<thead>
<tr>
<th>Type of Expense</th>
<th>Quantity</th>
<th>TIFB Funds</th>
<th>Local Funds</th>
<th>In-Kind</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section 1: Network Hardware</strong></td>
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</tr>
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<td>a. Virtual Private Network</td>
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<td>c. PC Workstations</td>
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<td>f. Mac Media Workstation</td>
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Schedule E -  
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### Section 4: Other Equipment

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### TOTAL DIRECT EXPENSES

<table>
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<tr>
<th>Section 1 + 2 + 3 + 4 =</th>
<th>Funds</th>
<th>Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td><strong>$52,700.00</strong></td>
</tr>
</tbody>
</table>

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Note: Using the **Justification Attachment** form, justify and briefly describe the basis for arriving at the cost of each line item. See Section 4, Page 3 of the Application Guide for additional information.

I approve the budget for this project and agree to abide by all financial guidelines.

_____________________________  _____________________________
Dora Fuselier                  Roland Smith
Controller                     Interim President

Date_________________________  Date_________________________
The Virtual Private Network provides for the secure transport of student information over the Internet.

The Ethernet switches will provide for high-speed network throughput needed to provide acceptable performance when students are logging onto course web servers.

Four servers with backup power supply to provide a platform for faculty members to create web-based course materials for students to access via the Internet at remote sites. Two servers will serve as WebCT® course servers and two will serve as streaming media servers. Dell Computer of Austin provided price quotes. Actual purchase will be made in accordance with the state purchasing guidelines and price may vary.

14 workstations for the purpose of supporting and training faculty at SFASU in the construction and administration of web-based courses. 14 workstation units at $4,696.00 each: $65,744.00

174 laptop units to provide access to and construction of web-based courses delivered by above servers to collaborative members’ sites and originating from SFASU. 174 laptop units at $3,100.00 each:

1 Multimedia workstation to be used for the creation and manipulation of digital media which will be incorporated into course web content. Dell Computers of Austin provided Price quotes.

1 LCD Monitor $2,206.00 and PC Multimedia workstation $8,681.00 used for creation of digital media in a PC environment.

1 Mac media workstation to be used for the creation and manipulation of digital media which will be incorporated into course web content. Apple Computer provided Price quotes. One unit: $16,978.00

Multimedia Systems.
Nine multimedia projection systems to support training sessions and multimedia course development in University departments providing courses leading to teacher certification. Various vendors provided price quotes. Detailed components are as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Price Each</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td>h. Multimedia System</td>
<td>9</td>
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<td>$35,955.00</td>
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<tr>
<td>j. VCR</td>
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<td>130.00</td>
<td>$1,170.00</td>
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<tr>
<td>k. Mobile Station</td>
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<td>l. Wireless Remote</td>
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<td>m. Cordless Keyboard</td>
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<td>n. Speaker Systems</td>
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<td>o. Lock Sets</td>
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Media Converter Systems
Two media converter systems will be used to produce streaming media content for courses.

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Price Each</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>a. Monitors</td>
<td>2</td>
<td>1,500.00</td>
<td>$3,000.00</td>
</tr>
<tr>
<td>b. Lighting</td>
<td>2</td>
<td>3,000.00</td>
<td>$6,000.00</td>
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<tr>
<td>c. Digital Video Camera</td>
<td>2</td>
<td>3,700.00</td>
<td>$7,400.00</td>
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<tr>
<td>d. Media Converter</td>
<td>2</td>
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<td>$2,000.00</td>
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<tr>
<td>e. VTR</td>
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<td>$2,000.00</td>
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<tr>
<td>f. Tripods</td>
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<td>$1,000.00</td>
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<tr>
<td>g. Speaker system</td>
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<td>300.00</td>
<td>$600.00</td>
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