LEQSF(2007-11)-ENH-PKSFI-PES-01

"Revised and New Curricula to Meet Post-Katrina Employment Development Needs of the Region"

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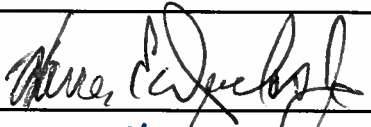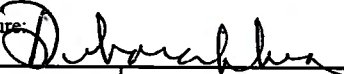
Lead Institution: Delgado Community College

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Proposal Narrative (without appendices)

COVER PAGE FOR POST-KATRINA SUPPORT FUND INITIATIVE
PRIMARILY EDUCATION SUBPROGRAM PROPOSALS
BOARD OF REGENTS SUPPORT FUND, FY 2006-07

1. Primary Submission Discipline: ɢ Biological Sciences ✓Information Technology ɢ Materials Science (check only one)	(For BoR Use Only) Application Number:

2. Name of Lead Institution of Higher Education: Delgado Community College (Include Branch/Campus/Other Components)

3. Address of Lead Institution of Higher Education: Computer Information Technology, Business & Technology Division, City Park Campus, 615 City Park Avenue, New Orleans, LA 70119

4. Title of Proposed Project: Revised and New Curricula to Meet Post-Katrina Employment Development Needs of the Region

5. Funds Requested:	P-KSFI Year 1: $ 242,633	ESIP (Year 1 only): $ 99,892	Total Project Request: $ 1,278,422	6. Proposed Duration: (Circle # of Yrs.) 1 2 3 ④ 5

7. Name(s) of Partnering Institution(s):
Southeastern Louisiana University

8. Does This Proposal Contain Confidential or Proprietary Information Which Falls Into a Category Described in R.S. 44:4(16)?
ɢ YES   ✓NO   (NOTE: If YES, the proposal MUST be appropriately marked.)

By signing and submitting this proposal, the signators are certifying that: (1) the proposed project has not already been funded/is not currently being funded/has not been promised funding; (2) this proposal has been reviewed and approved by an Institutional Screening Committee; and (3) the institution and the proposed project are in compliance with all applicable Federal and State laws and regulations, including, but not limited to, the required certifications set forth in: (a) Grants for Research and Education in Science and Engineering, NSF Grant Proposals Guide (GPG), NSF 03-2, effective 10/1/02, and (b) 45CFR 620, Subpart F (Requirements for a Drug-Free Workplace).

Name/Title Institution (if different from Item #2 above)	Dept./E-mail/Telephone No.	Signature
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Name/Title: (type or print) Deborah Lea Vice Chancellor of Learning & Student Development	Name/Title: (type or print) Warren R. Puneky, Jr. Dean, Business & Technology	Name/Title: (type or print) Steve Cazaubon Director of Budget & Finance
Signature:	Signature:	Signature:
Date: 3/14/07 Telephone Number: 504-483-4325	Date: 3/14/07 Telephone Number: 504-483-4360	Date: 3/14/07 Telephone Number: 504-361-6672

(Form 1-PKSFI-PES, 1-2007)

PROJECT SUMMARY

Name(s) of Lead Institution (Include Branch/Campus and School or Division) and Partnering Institution(s):
Delgado Community College, Computer Information Technology, Business & Technology Division, City Park Campus
Partnering with Southeastern Louisiana University

Address of Lead Institution:
Delgado Community College, Computer Information Technology, Business & Technology Division, City Park Campus, 615 City Park Avenue, New Orleans, LA 70119

Principal Investigators:
PI/PD: Dr. Warren E. Duclos, Jr.
Co-PI: Dr. Chris Koutsougeras
Co-PI: Dr. Troy Kammerdiener

Title of Project: Revised and New Curricula to Meet Post-Katrina Employment Development Needs of the Region

Abstract (DO NOT EXCEED 250 WORDS):

This project aims to develop infrastructure required to support Information Technology curriculum and educational activities, and to further update, re-focus, and modernize the IT related curriculum at two Louisiana campuses to meet the needs and challenges of the post-Katrina reality in this region.

The Computer Information Technology department at Delgado Community College and the Computer Science and Industrial Technology department at Southeastern Louisiana University are partnering in this project to pursue coordinated IT programs and laboratories outfitted to support these programs. The two institutions intend to develop proper coordination and articulation, including a 2+2 degree offering. The curriculum at the two institutions will be developed in such a way that advanced electives at Southeastern can complement and provide continuity with related courses taken by graduates of Delgado.

Specifically, Delgado Community College will focus on adding new concentrations in the critical employment-focused areas of Web Design and Information Technology Services which are also critical for business infrastructure in the area. Additionally we will develop new multi-disciplinary concentrations in the strategic areas of Information Security, Networking, Web Technologies, E-Commerce, and Electronic/Digital Media.

Delgado will also develop server labs necessary to support the modernization of programs as well as the development of new IT curriculum. A Networked Systems Administration Laboratory (NetSal) computer lab to be developed at Southeastern will provide server support for web development instruction at Delgado while supporting systems administration and web technologies instruction at Southeastern.

Revised and New Curricula to Meet Post-Katrina Employment Development Needs of the Region

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Goals and Objectives

The high-level goals of this proposal are to support Information Technology programs at Delgado and Southeastern through:

a. The coordinated development of new curriculum and appropriate modernization of existing curriculum components
b. Faculty development, to enable teaching new and revised curricula in Information Technology areas
c. The establishment of lab resources at both institutions, needed to support such programs
d. The establishment of mentoring mechanisms to support 2+2 programs

Primary objectives of this proposal are that on completion of the four-year program being requested, Delgado Community College will have revised and new curricula within its Computer Information Technology department and Southeastern will have new curricula established to support its new program in Information Technology (est. fall 2006). Southeastern will also have established a lab of resources to support courses in web development, systems administration, and networking; and the resources of this lab will be available via remote access for Delgado courses requiring web services for student work and educational experiences.

At the End of Year 1, Delgado will have revised curricula in Computer Information Technology, a new foundations course for students majoring in Computer Information Technology, a revised Computer Literacy course to provide for the general education requirement, and a plan for a new interdisciplinary curriculum shared with Business Studies: E-Commerce. Southeastern will have new courses in systems administration and web development

At the End of Year 2, Delgado will have additional new curricula, a new interdisciplinary curriculum shared with Business Studies: E-Commerce, a plan for a 2+2 program with Southeastern. Southeastern will have revised courses, additional servers and student administrator workstations for the Information Technology lab, articulation that would allow 2+2 programs, and a tutoring and mentoring program

At the End of Year 3, Delgado will have additional new curricula, a detailed proposal for the 2+2 program, a plan for a new curriculum in Digital Media, and a completed assessment of the first three years of the P-KSFI Funded Projects. Southeastern will have a growing Information Technology lab, along with additional fileserver storage. Both Delgado and Southeastern will have completed the study of the 2+2 course development which would support accreditation at both institutions.

At the End of Year 4, Delgado will have additional new curricula, and a plan for revisions and additions needed in the Computer Information Technology program. Southeastern will have completed the outfitting of the IT lab with the remaining servers and software needed for IT support as well as with in-house developed web interfaces that would allow students in Delgado classes to access the Information Technology lab. A series of specific IT class projects will be developed for each institution so that it can be supported by the IT lab. The tutoring and mentoring program will continue at Southeastern. The final set of feedback data to Delgado's curriculum change process will be provided.

Narrative and Bibliography

a. Project Rationale and Structure

(1) Context for Project

Delgado has a department of Computer Information Technology (CMIN) within its Division of Business and Technology; it has traditionally been a single concentration program. It is developing a new concentration in Web Design, which will appear in the 2007-2008 catalogue. The primary intent of this project is to enhance a strong academic program to serve the region with a variety of new curricula and attract students to the new and revised academic curricula. Prior to Hurricane Katrina, Spring 2005, there were 178 majors in CMIN. The following Spring, there were 84 majors. This Spring, there is resumed interest and growth with an enrollment of 100 majors.

Southeastern has a department of Computer Science and Industrial Technology (CSIT) within its College of Sciences and Technology and 260 students majoring in Computer Science. The CSIT department offers a Scientific concentration in Computer Science as well as an Information Systems concentration. It also has a newly established concentration in Information Technology that will appear in the 2007-2008 catalogue.

In the aftermath of Katrina, the Great New Orleans area suffered significant losses in the infrastructure and in enabling capacity for business. Central to this proposal is the mission to replenish and sustain the capacity and support for information technology which is vital to building and operating businesses and sustaining industry. There is virtually no business today that can run cost effectively and compete without some use of information technology support ranging from simple internet presence, to databases, I.T services, and secure servers. Therefore a skilled professional base to support needs in information technology is very important to the economic recovery of the affected area. With the Computer Science programs terminated at Tulane and Loyola other institutions are called to fill the void, and as a result both Delgado and Southeastern are experiencing an increase of demand for IT education. In addition, a priority for the economic development of the region focuses on developing a skilled IT workforce (GNO, Inc., 2006.)

Delgado and Southeastern (SLU) have independently decided to target Information Technology education as major program offerings. The Computer Science and Industrial Technology department at SLU established in the fall of 2006 a program in Information Technology which has been approved by the SLU's curriculum committees all the way up to the University level and it is now part of its regular catalogue. Students are showing an interest in returning to Delgado, especially in the newly envisioned area of web design, where several sections have been filled up and closed to additional students over the past few semesters. The Faculty and administration are in agreement that additional resources are needed to respond to this new student interest.

The alliance of Delgado and SLU is due to the fact that through this partnership there can be resource sharing and better student retention via more curricular and course variety and 2+2

programs. Also, the program offerings of Delgado and SLU have different educational objectives but can complement each other. A way to develop curriculum that would support 2+2 programs can greatly help student retention and provide incentives to students to pursue a bachelor degree after completing an associate degree.

The highlights of the plan are to establish resources needed to support IT education (e.g. faculty development and web server labs) which can be used to create new and revised curricula, to support IT courses at both campuses via network access, to develop courses which would not be possible to develop without such resources, and to develop mentoring programs which would help Delgado graduates transition into SLU programs. Further, the developments will be of great help for SLU's sustained ABET accreditation and to encourage Delgado's own aspirations for ABET associate degree program accreditation.

The area of greatest need is that of curriculum and course development. At Delgado, with a concentration of effort required of faculty in the teaching load (a full-time load is five (5) courses per semester), faculty have little time for continuing education, re-training, and development of new or revised courses.

Because of the temporary decrease in student population at Delgado and because financial resources are keyed directly to numbers of students enrolled, there are no funds available for faculty to pursue training, continue graduate education, make site visits, or attend professional conferences in their academic fields. Funds are scarce, also, for purchasing new teaching and learning resources such as the software and network servers required to support the newer client/server technologies and to educate students in them.

(2) Project Focus

This project will focus on improvement of computing technology education in the first two years of college. Through several cycles running concurrently, the project team will address needs for improvement in a 2-year college computing technology curriculum and give students new learning opportunities that will enhance their job skills and improve the workforce in the region.

Delgado has identified gaps in the post-secondary education pipeline in the greater New Orleans region; Delgado proposes to use this grant opportunity to address those gaps. Southeastern serves students from Tangipahoa, Baton Rouge, Mandeville, and New Orleans and is one important source of graduates for many employers in Baton Rouge, Mandeville, New Orleans, and many major industrial and manufacturing businesses in its vicinity. Through their advisory boards, as well as through their industrial constituencies, both institutions have been advised of an escalating need for IT professionals which has resulted in its commitment and the steps towards information technology education.

The major in Computer Information Technology at both institutions will be developed in a coordinated fashion that will provide state of the art resources which are necessary for delivering IT related courses as well as the related hands-on educational experiences. New faculty development opportunities will empower Delgado faculty to develop new curricula along the

lines recommended by the Association for Computing Machinery; and these new curricula will allow Delgado to respond to needs for 2-year education programs for its constituencies. Coordinated curricula will complement each other in a way that will invite graduates of Delgado to further pursue 2+2 opportunities at Southeastern, while it will allow Southeastern to offer a state of the art IT program that will fulfill requirements for ABET accreditation. The computer science program at Southeastern underwent ABET review in the fall of 2006 and was criticized for being centered around the Windows platform with little other exposure to other operating systems; a Networked Systems Administration Laboratory (NetSal) of Linux servers that is proposed here will support the development of the IT program and will also address the Windows-centric criticism.

At Delgado:

An existing concentration will be revised and new concentrations will be developed. Delgado proposed to migrate to this multi-concentration curricular structure, and thereby achieve a strategic use of a small core and make the most efficient use of overall resources, while also providing variety in the curriculum to meet the different and ever-changing needs of the workforce.

A new foundations course will be designed and implemented, using more hands-on learning opportunities in a computer lab setting. A Learn-by-doing pedagogy will give students the opportunity to learn foundational skills and associated concepts in: computing logic, web design, operating systems, database, programming, and information technology and systems careers. "Soft" skills will also be introduced; e.g., developing an analytic and problem solving mentality, being service-oriented, managing time and tasks, communication, commitment to life-long learning in the computer industry, and continuous professional improvement.

New concentrations will fill gaps that currently exist in computing education: web design, information security, information technology support, and electronic media. As an increasing number of small businesses convert to computerization, a larger number of workers are needed who have skills and understanding in these areas. Once prepared in one of these concentrations to enter the workforce at an entry level, our graduates will be ready to explore more highly technical training and learning options and attain higher levels of employment.

In response to Delgado's own professional advisory board's recommendations, a new interdisciplinary major will be created, E-Commerce, in collaboration with the Business Studies program at Delgado. Corporate and government managers met with Delgado recently and argued that more graduates are needed who understand better the various business functions on which they may be required to perform computer technology work.

A new 2+2 program will be developed in cooperation with Southeastern Louisiana University.

An existing service course for the general education requirement of the college will be revised and re-aligned with the State of Louisiana's chosen focus on IC3 standards and the IC3 certification program. With this revision in place, Delgado will be ready to coordinate cooperation with public high schools. That is, as their students take the appropriate computer

applications courses in high school and become IC3 certified, Delgado will be able to award credits to them as aligned with their Delgado degree program.

Throughout all efforts on new and revised curricula, the focus will be on student learning, on teaching through real world case scenarios, and utilization of a learn-by-doing pedagogy. The aim of all the curricula will be to prepare students for the real world of work, while also providing them with the foundation with which to continue their education, whether by additional training, vendor certification programs, or a 4-year degree at a college or university.

Much of the funding will be spent updating the expertise of the Faculty, to enable them to design, produce, and implement the revised and new curricular products. Expenditures will include graduate courses, training, site visits to colleges that have such programs as we are developing, and attendance at professional conferences.

By developing and implementing these new and revised curricula, Delgado will be able to attract and retain more students and contribute to the continued rebuilding efforts of the New Orleans area.

Additional funding will be used to leverage Delgado's resources in existing computer labs, e.g., the labs that would be dedicated to E-Commerce and another to Digital Media.

At Southeastern:

A Networked Systems Administration Laboratory (NetSal) computer lab will be developed which will be outfitted with Linux servers appropriate for projects and educational experiences relating to many facets of Information Technology. These servers will support courses in web development, server programming, web design, system administration, computer security, and networking. We already have some courses in networking and web development which however need to be updated and offer project experiences with Linux servers as opposed to just Windows. The need for enhancement of the educational experiences with platforms other than MS Windows has been noted during our ABET accreditation review and it is a priority for the CS programs course development but it will also support necessary improvements and modernization of the existing CS programs.

New courses are necessary and will be developed for system administration and computer security. In addition, new leveling courses will be developed for allowing students from 2 year programs to effectively transition into SLU's programs while preserving ABET requirements. Appropriate mentoring resources will be offered for Delgado students as well as faculty.

The PIs from both institutions will identify the needs and requirements that must be preserved for SLU's ABET accreditation and the possible future accreditation of Delgado's programs through ABET's accreditation for associate degree programs.

SLU will provide materials for course development to Delgado and the PIs will work to facilitate this. Further, SLU will provide remote access to the servers of the proposed IT lab for Delgado IT coursework. In this way the proposed lab will serve a dual purpose and will provide resources

that Delgado cannot easily afford to maintain. The PIs at SLU will also develop web interfaces to the IT lab for use by the instructors and students at SLU.

(3) Personnel

Delgado personnel:

All faculty in Computer Information Technology will participate in the program; this is the strength of this proposal for Delgado. The project will be coordinated by Department Chair and Principle Investigator Dr. Warren E. Duclos, Jr. Dr. Duclos has 12 years experience in business computing, 6 years experience in business computing consulting, and 15 years experience as academic program director of an information systems department at Tulane University before joining Delgado in the summer of 2005.

In addition, the College will be hiring two additional faculty members this summer, who will also participate in this program.

Southeastern personnel:

The co-PI Dr. Cris Koutsougeras is the department head for Computer Science & Industrial Technology (CSIT) at Southeastern. Dr. Koutsougeras has a PhD in Computer Science and 18 years of computer science instruction and research at Tulane University prior to joining SLU in the summer of 2006. He has received many research awards including an NSF-Epscor cluster grant where he worked in collaborative projects involving three institutions (ULL-LSU-Tulane). He has also successfully led a team of undergraduate students to the 2005 DARPA Grand Challenge (Gray Team was 4th among the 5 that finished).

The co-PI Dr. Troy Kammerdiener has a PhD in Computer Science and 15 years experience as a faculty member. He is currently the chairman of the curriculum committee at CSIT of Southeastern, and he has been the faculty in charge of the development of the Information Technology program. He has also received enhancement grants from the BOR with he has successfully established electronic instruction classes which received high praise during our last accreditation review by the external reviewers.

Therefore there should be no doubt that this project will be carried out by highly qualified people with proven skills. The department heads of the respective departments at both institutions are among the PIs of this project, therefore the commitment to the project is solid and the management of the project will be carried by the same people who are chiefly responsible for the program offerings.

As evident in the commitment letters from Warren Puneky, Dean of Business & Technology at Delgado, and Daniel McCarthy, Dean of Science and Technology at Southeastern, the administration at both institutions support and commit institutional resources to this project in order to enhance the STEM offerings of the institutions.

b. Work Plan

(1) Proposed Work

At Delgado:

The work will be to totally revise and expand Delgado's existing program in Computer Information Technology. This will include the creation of a new foundational course and the definition of a 4-course core for the major. It will also include a revision of the existing concentration and the creation of new concentrations in CMIN. Finally, it will include a new interdisciplinary major in conjunction with the Business Studies program and creation of a 2+2 articulation program with a 4-year institution, Southeastern Louisiana University.

Crucial to the process will be use of a shortened, expedited version of the System Development Life Cycle, the longer and slower version of which has proven helpful to information technology projects. Through a cycle of (1) general planning, (2) resource gathering, (3) detailed production, and (4) response to feedback from the transitional mentoring program at SLU, each new or revised curricula will be realized systematically but quickly. This methodology has been used successfully by the primary investigator at Tulane University for 15 years (previous to joining Delgado).

In the general planning phase top-down and bottom-up techniques are employed to (a) gather information on the needs of the local community, expertise of the faculty, programs succeeding at aligned and comparable colleges, availability of resources (especially instructional and technological), and preferences of students. Also in this phase, (b) general pictures of potential courses and an overall curriculum architecture are designed and (c) identification of support cultures and paths of approval and authentication paths are identified.

During resource gathering, everything it will take to complete detail design and begin implementation are identified and brought into play. This includes (a) resources such as technologies (hardware, software networking, servers), physical space, instructional materials (including texts, learning materials and tools), faculty development and training. But it also includes (b) firming up all needed support from external units (Advisory Board, vendors, textbook publishers) and (c) obtaining appropriate legitimization from various internal administrators and committees needed to authorize the program (Faculty, Dean, Provost, Curriculum Committee, Information Technology group, the College bookstore, etc.).

Finally, in detailed production, complete curricula are engineered, comprehensive and detailed syllabi are produced, all needed resources put in place, and the courses taught. Continuous improvement principles are applied, through formative and summative evaluations for each course and for the curricular concentration as a whole.

The value of this approach is that several cycles can be pursued simultaneously, often achieving synergy across projects. That is, detailed production will be running for one concentration while general planning may be running for another and resource gathering for still another.

Throughout, principles of instructional design and learning centered course design will be used, including specification of objectives, student learning outcomes, and assessments linked to them.

At Southeastern:

The specific work plan of Southeastern with respect to this project is as follows.

<u>Within Southeastern:</u> We will establish and outfit a Networked Systems Administration Laboratory (NetSal) which will enable necessary improvements in our IT related courses (in particular Information Assurance and Computer Networking) and will allow support for new ones (in particular Systems Administration, Web Systems and Technologies, and Advanced Computer Networking). Both the lab and the course developments represent permanent and sustainable developments. The lab will be maintained under the same operating budgets as the other labs of the CSIT department as well as by the Student Technology Fee program of Southeastern University.

<u>With respect to Delgado:</u> We propose supporting Delgado's curriculum improvements on both fronts of a 2+2 program with two initiatives housed at Southeastern Louisiana University.
- The Networked Systems Administration Laboratory (NetSal) and associated services provided by students in our Information Technology program.
- A Transitional Student Mentoring and Tutoring (TranSMAT) program that uses the NetSal facility on a part-time basis and provides support to students transitioning from Delgado to our accredited 4 year program.

The NetSal facility will eventually consist of 32 rack-mounted servers controlled from 16 student workstations. NetSal will support courses at Delgado by providing hosting facilities for students in web design and administration courses, and possibly in other types of courses. NetSal will also support many courses in the Information Technology program at SLU, especially including Internet Programming, Information Systems, Software Engineering, and Database Systems.

NetSal will be supported by students in several courses in the Information Technology program at SLU, including Systems Administration, Web Systems and Technologies, Principles of Information Assurance, Computer Networking, and Advanced Computer Networking. These students will form network/system administration teams, each team composed of one or more students from each of these courses. These teams will be assigned two rack-mounted servers from the pool of available servers at NetSal. One server will be maintained and administered by the same team of students as a stable hosting platform, and will provide services to at least one class of students at either Delgado or SLU. The other server will be a development platform which students will use for assignments in maintenance and configuration from the various classes, and by definition will be unstable, but whose goal is to become a stable platform which could be used in a subsequent semester to provide services. A faculty member at SLU will supervise these teams to provide the necessary services to classes during the regular semesters.

In this way, NetSal will support upper level information technology administration-type classes with at least 16 students each. From the user-perspective, it will support a number of classes of 40-60 students each by providing hosting services. It can support a minimum of 4 classes in the

first year, 8 classes in the second year, 12 classes in the third year, and 16 classes in the fourth and subsequent years.

On a part-time basis, the workstations in the NetSal facility will also be used by students in the TranSMAT Program, described below. These students will not have administrative access to the rack-mounted servers, however.

The Transitional Student Mentoring and Tutoring (TranSMAT) program is designed to support the initial transfers from Delgado's 2+2 program, and to inform their curriculum changes over a 4-year adjustment process. Students transferring from Delgado will be supported by mentoring and tutoring services provided by at least 8 peer student tutors. Student tutors will be employed and trained starting from year two, so that the program will be in relatively mature operation by the time Delgado transfer students are expected. The program will determine the curricular needs that these students are bringing with them from their first two years at Delgado. This information will be provided as feedback to Delgado, to help them adapt their program to better prepare students for their final years in SLU's accredited 4 year program. An SLU faculty member will supervise the TranSMAT program and provide the resulting feedback to Delgado.

These students will also have the opportunity to use the NetSal facility from multiple perspectives, first as users of the services at Delgado, then as observers from the mentoring perspective, and finally as student administrators providing services back to their 2-year home institution.

As part of the project we will invite the feedback of the advisory boards of both departments in the two institutions in order to ensure that the planned developments meet the demand of the potential employers of our students. We will also identify an out of state expert who will be invited to visit our facilities and serve as our mentor throughout the project period and even beyond that.

(2) Project Structure

Academic policies and procedures will guide the structure of the project throughout. All faculty will participate. Research and information gathering will be pursued and shared; a general plan will be written and circulated for critique and approval. And final proposals will be documented and will be disseminated through regular academic channels, administrators and committees.

Each cycle begins with a general planning phase and with the identification of tasks that need to be completed before the second phase can begin. These will include site visits to institutions that have a program such as we are planning, needs of the faculty for training, and all material needs of the program (computer hardware, software, student learning materials).

Faculty will proceed, in the second phase, to realize the detailed information and training they need in order to write the detailed curriculum including all the courses. This phase includes site

visits, conferences, training, and examination of software and learning materials available in the particular area of the curriculum being designed.

In the third phase, Faculty will produce and implement the curriculum, including the new course objectives, student learning outcomes, and appropriate assessments aligned to them.

At Southeastern, the co-PIs will develop an initial plan for curriculum changes and additions and will be in charge of the development of the NetSal lab. Two curriculum committees will then be involved in the implementation phase of the plan. One will be of course the CSIT department curriculum committee which is ultimately responsible for establishing curriculum and catalogue changes. Another inter-institutional committee will be formed with members from both Southeastern and Delgado to set the specifications and to provide guidance for those aspects of curriculum development that are commonly needed at both institutions to facilitate the project and the 2+2 program plans.

The CSIT department curriculum committee will proceed immediately with planning curriculum modifications and new course outlines. It will study the needs of the new Information Technology program with particular attention to the requirements for ABET accreditation. It will study the modernization needed in existing coursework in the existing Information Systems and the Scientific concentrations.

The inter-institutional committee, in which the PIs will be members, will study the issues involved in 2+2 programs, the necessary articulation, and will produce guidelines for needs and assessments needed for 2+2 programs with particular attention to ABET accreditation requirements. These guidelines will then be passed on to the curriculum committees at each of the two institutions for further study and implementation.

The CSIT department curriculum committee will consider these guidelines and will be expected to work them into its plan for curriculum modifications. It will also study the logistics of course rotation plans and the schedule of course offerings to ensure proper opportunities for the supported programs.

While the priority of the inter-institutional committee will at first focus on guidelines for a coordinated curriculum development, it will later assume the role of assessing the developments and the progress of the project. Beyond the project period this committee will still be useful as an instrument for sharing information between the two institutions, particularly about optimal practices to facilitate program attractiveness and to sustain graduation rates (reduce attrition). It will be a useful means to maintain continued program quality that constantly evolves in order to meet the demands of the local and regional employers and workforce needs.

(3) Project Impact

The impact of this program will be that the local community will be served by the creation of new curricula and revision of existing curricula in Computer Information Technology. Students will have new and revised curricula through which to pursue education in Information

Technologies. It is expected that graduates from either institution will be better prepared to meet the challenges of the employers not only in this region but across the nation. They will have the proper variety and depth of skills to be valuable to businesses and employers requiring IT support skills. Thus the impact will not be limited to human resources only but it will also extend to impact in the State's economy. It should be noted that with some Computer Science programs terminated at Tulane (EECS) and Loyola (CS and IS) there is a need to fill a void. Also, plans for establishing a technology park on the New Orleans Westbank, while at the stage of consideration, are indicative of the strategic importance of IT with respect to the region's economy.

With this proper support and the appropriate development facilitated by this grant, our programs will be expected to be reputable and will attract and retain students. In the case of Southeastern's program, the new lab and the additional courses will ensure the continued ABET accreditation of the existing CS concentrations as well as the earning of accreditation for the new Information Technology concentration. This will facilitate Southeastern's aspiration to become a nationally competitive institution for excellent undergraduate education.

Another impact for the State is that it will be possible to provide more advanced IT training for employees of local businesses which without proper laboratory support we cannot do now. With the existence of proper lab support it is possible to float a summer camp program for intensive training on system administration as well as web technologies. We believe that many local companies would send some of their employees to such programs.

In both cases the outcome will be better skilled work force in IT that will be qualified to support modern businesses and thus impact economic development.

(4) Performance Measures and Milestones

The project outcomes are very specific and thus easy to assess. The labs to be developed represent a demonstrable and mission specific goal with a specific timeline which will be reported every year to the Board of Regents via the annual executive report.

Programmatic developments are likewise demonstrable and they will have to carry the approval of the curriculum committees not only at the departmental level but also at the schools level with eventual records in the official course catalogues.

The above official institutional instruments and lab expenditure reports will be the ultimate assessment tools for the Board of Regents and will be provided along with the annual executive reports.

Annual performance measures and milestones are:
  a. At the End of Year 1:
    1) Delgado will have a revised curriculum in Computer Information Technology
    2) Delgado will have a totally new foundations course for students majoring in Computer Information Technology

3) Delgado will have a totally revised Computer Literacy course, to provide for the general education requirement in computing for the College
4) Delgado will have a new curriculum (Web Design) as a concentration within Computer Information Technology
5) Delgado will have a general plan for an additional new curriculum (Information Technology Support) in Computer Information Technology
6) Delgado will have a general plan for a new interdisciplinary curriculum shared with Business Studies: E-Commerce
7) Southeastern will have an Information Technology lab with initially 8 Linux servers and 8 student administrator workstations
8) Southeastern will have new courses in systems administration and web development

b. At the End of Year 2:
1) Delgado will have one additional new curriculum (Information Technology Support) as a concentration within Computer Information Technology
2) Delgado will have a new interdisciplinary curriculum shared with Business Studies: E-Commerce
3) Delgado will have a general plan for a 2+2 program to be offered in conjunction with Southeastern Louisiana University.
4) Delgado will have a general plan for an additional new curriculum (Information Technology Security and Forensics) in Computer Information Technology
5) Southeastern will have revised courses in computer networking and computer security
6) Southeastern will add 8 additional servers and 8 student administrator workstations to the Information Technology lab
7) Articulation that would allow 2+2 programs will be in place
8) Arrangements for mentoring of students by Delgado students and faculty will be in place
9) Southeastern will establish a tutoring and mentoring program with 3 student tutors under the supervision of a faculty member. The first year of this program will be exploratory, training tutors and devising standards and procedures, using introductory and existing transfer students as a test-bed audience. Some early feedback may be provided to the Delgado curriculum change process if warranted by early Delgado transfers.

c. At the End of Year 3:
1) Delgado will have one additional new curriculum (Information Technology Security and Forensics) as a concentration within Computer Information Technology
2) Delgado will have a detailed proposal for a 2+2 program to be offered in conjunction with Southeastern Louisiana University
3) Delgado will have a general plan for a new curriculum in Digital Media
4) Delgado will have completed an assessment of the first three years of the P-KSFI Funded Projects

5) Southeastern will add 8 servers to the Information Technology lab, along with additional fileserver storage

6) The PIs from Delgado and Southeastern will have completed the study of the 2+2 course development which would support accreditation at both institutions

7) Standards, procedures, and training should be in place for the tutoring and mentoring program at Southeastern. Tutoring staff will be increased to 8 student tutors. It will begin general, advertised service to Delgado transfer students. Also, leveling courses will be developed to transition students from 2 year programs. Data on the preparation of Delgado students, and curricular recommendations, will be assembled from the results of the first full year of tutoring service and returned to Delgado to inform their curriculum change process.

d. At the End of Year 4:

1) Delgado will have one additional new curriculum (Digital Media) as a concentration within Computer Information Technology

2) Delgado will have a general plan for revisions and additions needed in the Computer Information Technology program

3) Southeastern will have completed the outfitting of the Information Technology lab with the remaining 8 servers and software needed for IT support as well as with in-house developed web interfaces that would allow students in Delgado classes to access the Information Technology lab

4) A series of specific IT class projects will be developed for each institution so that it can be supported by the IT lab

5) The tutoring and mentoring program will continue at Southeastern. The final set of feedback data to Delgado's curriculum change process will be provided

(5) Sustainability and Scalability

There is nothing in this proposal that will require any radical new budget lines of Delgado, of Southeastern, or of the Board of Regents over the long term. No new buildings or academic department units, or renovations are implied. Delgado and Southeastern, using their own existing financial structures, will be able to sustain the curricula being revised or created.

As enrollments increase, which is the expectation, student numbers will support an increase in faculty positions. Existing budgetary structures will support this growth without the need for additional financial support.

What we are requesting is incubation funds – not available from any other sources – in order to aid Delgado in making a paradigm shift from a dimensional curriculum to a multi-concentration curriculum. Once this shift is created, different concentrations will ebb, flow, or fade and be replaced by new ones.

For Southeastern, this is similarly a request for incubation funds that are not available from other sources. The faculty of CSIT can support the proposed program developments and in that respect the project is sustainable but for this we rely on the labs requested here that are a firm

prerequisite for the support of such developments and the maintenance of accredited programs. The labs are sustainable via the existing support infrastructure and the existing Student Technology Fee with no changes needed.

An increased enrollment and/or service credit hours will support further IT course development and will also support a case for expanding the faculty size. It should be evident that this would be the only possible issue in what concerns scalability. The labs being accessible via the network should not present scalability issues in the near future; however, any issues of lab scalability in the longer term make sense only in the presence of substantial enrollment increase in which case adding some servers to an already existing lab should be possible.

c. Leveraging of Resources

This plan is designed to be a "good fit" with the resources of Delgado at this time. Existing resources are sufficient to cover basic faculty salaries, provide sufficient space for required educational facilities, some of the needed technology, and all indirect costs.

Delgado's Business and Technology Division, in which the work for this grant will be housed, has agreed in principle to partner with GNO Inc. to work together on a project to advance the economic development of this region. GNO Inc. is particularly interested in working with Delgado to define and advance a curriculum in Digital Media, which is included in this proposal.

Also, Delgado will continue to commit considerable STEP (Student Technology Enhancement Program) funds to computer technology education (these are funds collected as student fees when students register for courses taught using technology). Computer hardware and SmartBoards will be committed to alignment with this proposed grant project.

Wherever permitted, any funds awarded from Carl Perkins Fund grants will be aligned to this proposed grant project.

Delgado aggressively pursues software grants and reduced pricing from software vendors. Grant awards such as Microsoft Academic Initiative and IBM's Academic Initiative will be aligned with this project as much as possible.

At Delgado, faculty have been working to include a service learning dimension to their courses. Events such as workshops on developing relationships with local non-profits help faculty learn to and incorporate service projects as a part of course outcomes/requirements. Faculty receive a stipend from the "Learn and Serve America" grant, which we were awarded last year. They can also apply for mini-grants that cover supplies for these projects. Wherever possible, this work on new and revised curricula will be connected to efforts also being pursued toward service learning.

In addition, this grant project will be aligned with curriculum and course development projects Delgado pursues in connection with its existing Title III grant, "Focusing on Learning for

Student Success." Faculty development achieved there will build synergy for work in conjunction with this grant's goals.

Delgado hopes that valuable expertise will be realized through it relationship with Southeastern Louisiana University, enhanced through this grant. Whether through consulting, graduate courses, training, team projects, or the joint venture in the 2+2 degree program, Southeastern can provide guidance needed by Delgado faculty.

Focus of the resources received from the grant can therefore be used to supplement and round out what is already budgeted here. What we need most are additional resources that enable faculty to develop new curricula and courses: graduate courses, training, exposure to other schools' program by site visits and professional conferences, and some additional hardware and software with which to teach.

In the case of Southeastern, the existing programs will greatly benefit from the resources made available for IT instruction and the possibility for added enrollment via the 2+2 programs represents an additional value.

There is more however, in that the CSIT department is committed to a transition into Engineering Technology programs and from this perspective the most important aspect of this project is that it provides seeds needed for jump-starting this process. So this project is important to Southeastern in many different ways and will facilitate the future leveraging of resources at the levels of hardware, course offerings, sustainability of accreditation standards, future faculty expansion, increased enrollment, and the ability to offer interesting educational experiences and to engage students in meaningful STEM class and capstone projects. What we propose to build with this project is not simply new programs; it also serves recognized and pressing needs for the continued accreditation of our existing programs and it is also in line with the University's and the CSIT department's clearly stated commitment to move towards Engineering Technology programs.

It should also be noted that this project is about coordinated development and so the requested funds will serve dual purposes. A prime example is the plan to offer support to Delgado's programs by allowing server access in the NetSal lab; such use of the lab represents an effective reduction of the funds that would be required additionally on the Delgado side.

d. Bibliography

Accreditation Board for Engineering and Technology (ABET) Resources for programs
    www.abet.org.
Association for Computing Machinery, Guidelines for Associate Degree Program to Support
    Computing in a Networked Environment, March 2000.
GNOInc., Creation and Development of a Digital Interactive Media Center, a Prospectus, 2005.
Preliminary Enrollment Report, Delgado Community College, Office of Institutional Research,
    February 9, 2007.

Budget Project Year 1

Title of Proposed Project: New and Revised Information Technology Curricula
Principle Investigators: Dr. Warren Duclos (Principle) and Dr. Chris Koutsougeras

Institutions of Higher Education: Delgado Community College (Principle) and University
of Southeastern Louisiana

I. PROPOSED BUDGET:

	Support Fund Money Requested	Institutional Match	Private Sector / Other Match
A. Salaries and Fringe:			
1. Research Salaries	$ 129,825	$ 41,444	
2. Clerical Salaries			
3. Subtotal	$ 129,825	$ 41,444	
4. Fringe Benefits	$ 28,767	$ 10,334	
5. Graduate Asst.	$ 8,000		
6. Student(s)			
7. Endowment(s)****			
8. Subtotal A	$ 166,592	$ 51,778	
B. Supportive Expenses:			
1. Travel	$ 14,690		
2. Supplies			
3. Consultants			
4. Rentals			
5. Printing			
6. Equipment (See Note below)			
7. Other Expenses (Identify)			
a. Graduate courses	$ 12,000		
b. Certifications	$ 4,800		
c. Software Education/Training	$ 10,000		
8. Subcontracts			
9. Subtotal B	$ 175,933	$ 2,400	
C. Overhead:			
1. (Not Permitted as Grant Item)		$ 27,402	
TOTAL PROJECT COST:	$ 342,525	$ 81,580	

Note: Items under "B6 -- Equipment" are requested for Delgado under ESIP funds, for first year only, and are already included in Total Project Cost	
	$ 99,892

TOTAL PKSF PROJECT COST	$ 242,633

Budget Project Year 2

Title of Proposed Project: New and Revised Information Technology Curricula
Principle Investigators: Dr. Warren Duclos (Principle) and Dr. Chris Koutsougeras
Institutions of Higher Education: Delgado Community College (Principle) and
University of Southeastern Louisiana

I. PROPOSED BUDGET:

	Support Fund Money Requested	Institutional Match	Private Sector / Other Match
A. Salaries and Fringe:			
1. Research Salaries	$ 143,578	$ 50,822	
2. Clerical Salaries			
3. Subtotal	$ 143,578	$ 50,822	
4. Fringe Benefits	$ 29,728	$ 11,284	
5. Graduate Asst.	$ 8,500		
6. Student(s)	$ 11,232		
7. Endowment(s)****			
8. Subtotal A	$ 193,038	$ 62,106	
B. Supportive Expenses:			
1. Travel	$ 12,080		
2. Supplies			
3. Consultants	$ 3,300		
4. Rentals			
5. Printing	$ 2,000	$ 2,000	
6. Equipment	$ 29,919	$ 2,400	
7. Other Expenses (Identify)			
a. Graduate courses	$ 12,600		
b. Certifications	$ 4,200		
c. Software Education/Training	$ 8,400		
8. Subcontracts			
9. Subtotal B	$ 72,499	$ 4,400	
C. Overhead:			
1. (Not Permitted as Grant Item)		$ 21,243	
TOTAL PROJECT COST:	$ 265,537	$ 87,749	

Budget Project Year 3

Title of Proposed Project: New and Revised Information Technology Curricula
Principle Investigators: Dr. Warren Duclos (Principle) and Dr. Chris Koutsougeras
Institutions of Higher Education: Delgado Community College (Principle) and University of Southeastern Louisiana

I. PROPOSED BUDGET:

	Support Fund Money Requested		Institutional Match		Private Sector / Other Match
A. Salaries and Fringe:					
1. Research Salaries	$	140,535	$	61,255	
2. Clerical Salaries					
3. Subtotal	$	140,535	$	61,255	
4. Fringe Benefits	$	27,987	$	12,294	
5. Graduate Asst.	$	9,000			
6. Student(s)	$	31,150			
7. Endowment(s)****					
8. Subtotal A	$	208,672	$	73,549	
B. Supportive Expenses:					
1. Travel	$	9,930			
2. Supplies					
3. Consultants					
4. Rentals					
5. Printing					
6. Equipment	$	80,759	$	2,400	
7. Other Expenses (Identify)					
a. Graduate courses	$	13,200			
b. Certifications	$	3,200			
c. Software Education/Training	$	6,200			
8. Subcontracts					
9. Subtotal B	$	113,289	$	2,400	
C. Overhead:					
1. (Not Permitted as Grant Item)			$	25,757	
TOTAL PROJECT COST:	$	321,961	$	101,706	

Budget Project Year 4

Title of Proposed Project: New and Revised Information Technology Curricula
Principle Investigators: Dr. Warren Duclos (Principle) and Dr. Chris Koutsougeras
Institutions of Higher Education: Delgado Community College (Principle) and University of Southeastern Louisiana

<u>I. PROPOSED BUDGET:</u>

	Support Fund Money Requested	Institutional Match	Private Sector / Other Match
A.<u>Salaries and Fringe:</u>			
1. Research Salaries	$ 133,069	$ 72,745	
2. Clerical Salaries			
3. Subtotal	$ 133,069	$ 72,745	
4. Fringe Benefits	$ 27,891	$ 13,367	
5. Graduate Asst.	$ 9,500		
6. Student(s)	$ 32,400		
7. Endowment(s)****			
8. Subtotal A	$ 202,860	$ 86,112	
B. <u>Supportive Expenses:</u>			
1. Travel	$ 10,180		
2. Supplies			
3. Consultants			
4. Rentals			
5. Printing	$ 2,200	$ 2,200	
6. Equipment	$ 109,359	$ 2,400	
7. Other Expenses (Identify)			
a. Graduate courses	$ 13,800		
b. Certifications	$ 3,400		
c. Software Education/Training	$ 6,600		
8. Subcontracts			
9. Subtotal B	$ 145,539	$ 4,600	
C. <u>Overhead:</u>			
1. (Not Permitted as Grant Item)		$ 27,872	
<u>TOTAL PROJECT COST:</u>	$ 348,399	$ 118,584	

Board of Regents Support Fund
Post-Katrina Support Fund Initiative

Budget Composite of All Four Years

Title of Proposed Project: New and Revised Information Technology Curricula
Principle Investigators: Dr. Warren Duclos (Principle) and Dr. Chris Koutsougeras
Institutions of Higher Education: Delgado Community College (Principle) and University of Southeastern Louisiana

I. PROPOSED BUDGET:

	Support Fund Money		Institutional Match		Private Sector / Other Match
A.Salaries and Fringe:					
1. Research Salaries	$	547,006.86	$	226,266.00	
2. Clerical Salaries					
3. Subtotal	$	547,006.86	$	226,266.00	
4. Fringe Benefits	$	114,373.32	$	47,279.00	
5. Graduate Asst.	$	35,000.00			
6. Student(s)	$	74,782.08			
7. Endowment(s)****					
8. Subtotal A	$	771,162.26	$	273,545.00	
B. Supportive Expenses:					
1. Travel	$	46,880.00			
2. Supplies					
3. Consultants	$	3,300.00			
4. Rentals					
5. Printing	$	4,200.00	$	4,200.00	
At Delgado					
6. Equipment (See Note below)	$	354,480.00	$	9,600.00	
7. Other Expenses (Identify)					
At Delgado					
a. Graduate courses	$	51,600.00			
b. Certifications	$	15,600.00			
c. Software Education/Training	$	31,200.00			
8. Subcontracts					
9. Subtotal B	$	507,260.00	$	13,800.00	
C. Overhead:					
1. (Not Permitted as Grant Item)			$	102,273.78	
TOTAL PROJECT COST:	$	1,278,422.26	$	389,618.78	

> **Note: Items under "Equipment" are requested for Delgado under ESIP funds, for first year only, and are already included in Total** $ 99,892.00

TOTAL PKSFI PROJECT COST $ 1,178,530.26

Justification for Budget
New and Revised Curricula
Delgado Community College and Southeastern Louisiana University

Part A, Salaries and Fringe:

1. Salaries:
- Department Chair will serve as Principle Investigator at Delgado, for one fifth salary over 12 months and two course equivalent stipends in summer. Delgado will match with internal funds to support this effort.
- One new temporary full-time faculty will be hired in the first year; in years 3 and 4, the institution will begin to absorb portions of the salary (50% and 75%, respectively).
- 16 course releases and stipends per year will be paid to faculty to develop new courses and structure them in the new and revised curricula being developed; working for $1500 course releases; each year, Delgado will match a portion these grant expenditures with other institutional funds.
- One Office of Information Technology department staff person at 25% time, in first year, will address new technology requirements of new and revised curricula.
- Dr. Kammerdiener and Dr. Koutsougeras will serve as co-PI's at SLU. Dr. Kammerdiener will supervise the student system administration teams and the implementation of the Networked System Administration Lab during regular semesters of the program. Dr. Koutsougeras will supervise the mentoring program and the evaluation of transitional students and feedback to Delgado. They will each receive a one course load reduction (in addition to their standard one course reduction, which comes from the SLU match).

All personnel receiving monies from PKSFI funds will be paid following established institutional policies.

4. Fringe Benefits: Institution fringe benefits for Delgado include retirement, health insurance, and life insurance average 24%. SLU standard fringe is 30%, increasing by 0.15% each year.

5. Other:
- Tutor at Delgado will be dedicated to assisting students in new and revised curricula will be hired at an hourly rate; Delgado shares this cost.
- SLU will hire student tutors at 20 hours per week each, every regular semester of years 2, 3 and 4. Only 3 tutors will be hired during year 2, which will be used to test and develop the mentoring and tutoring program to a mature form, which will be deployed with a full staff of 8 tutors during years 3 and 4.

Part B, Supportive Expenses:

1. Travel:

- Conferences. One professional conference for each of 6 faculty is projected for each year, e.g., Information Systems Education Conference, 6 faculty @ $475 registration, $350 airfare, $140 hotel, and $40 per diem for 3 days; costs increase with inflation in years 2 through 4.
- Site Visits. One site visit for each of 6 faculty to an exemplary institution (e.g., Valencia Community College, Johnson County Community College, Cayuhoga Community College) is projected each year; @ $350 airfare, $140 hotel, and $40 per diem for 3 days; costs increase with inflation in years 2 through 4.
- Corporate good-will visit with GNOINC. Demonstrate interest in partnering with major corporation in Digital Media program; @ $350 airfare, $140 hotel, $40 per diem for 3 days

2. Supplies: DCC and SLU cover all supplies.

3. Consulting: Curriculum and Instructional Development Consultants, by SLU; @ 3 days @ $600 each ($500 + travel); External Evaluator after 18 months.

4. Rentals:

5. Printing: Informational materials for students, re: new curricula; shared by Delgado

6. Equipment:

- New server at Delgado will support client/server services for database and web based programming for web design. The server will be a Dell PowerEdge 650 or similar.
- Adobe/Macromedia Web Development Bundle; software for startup of new web design concentration; 56 student computers, 24 learning lab computers, 5 faculty office computers, 5 faculty personal tablet computers
- Microsoft Expression Software for use in new and revised curricula; same #'s as above
- 6 Tablet laptop computers for participating faculty
- Licenses for IC3 training software will aid students in attaining IC3 certification
- A Networked System Administration Laboratory at SLU. Lab capabilities will be phased in over a period of 4 years:
  - Year 1: 8 student administrator workstations connected to 8 rack-mounted servers through a KVM IP switch (so that any workstation can control any server). All servers share an uninterruptible power supply, a tape backup unit, and a network switch.
  - Year 2: Lab capacity is doubled to another 8 student administrator workstations connected to 8 rack-mounted servers through another KVM IP switch, and sharing another uninterruptible power supply.

- Year 3: Lab serving capacity is increased by another 8 rack-mounted servers, with another uninterruptible power supply, controlled through the existing workstations. Additional file storage is provided for all servers with a rack-mounted fileserver.
- Year 4: Lab serving capacity is increased by another 8 rack-mounted servers, with another uninterruptible power supply, controlled through the existing workstations.

7. Other Expenses

   a. Graduate courses: Reimburse faculty for taking graduate courses in areas of need for new and revised curricula; ceiling of $2000 each for 6 courses
   b. Certifications: Self-Study, Online and other learning materials to assist faculty in getting certifications in IC3 and CIW; exam fees; 5 faculty at $900 each
   c. Training. Software skills and education training for each of 6 faculty is projected each year, e.g., CIW training, @ $850 registration, $350 airfare, $140 hotel, and $40 per diem for 5 days; costs increase with inflation in years 2 through 4.

8. Subcontracts:

9. Overhead of 8% is portion of institutional match

Note: Detailed budget spreadsheet on file with the Office Of Grants Development, Delgado Community College, Dr. Claudia Saucier, Director, 504-483-4172

BIOGRAPHICAL SKETCH	
Name Warren E. Duclos, Jr.	Position Title Department Chair, Computer Information Technology, Delgado Community College

EDUCATION (Begin with baccalaureate or other initial professional education and include postdoctoral training.

INSTITUTION AND LOCATION	DEGREE	YEAR CONFERRED	FIELD OF STUDY
Spring Hill College	Bachelor of Arts	1969	Philosophy * Mathematics
St. Louis University	Master of Arts	1971	History of Religion
The Florida State University	Doctor of Philosophy	1985	Higher Education Management
Tulane University	Graduate Course	1990	Information Systems

CURRENT POSITION –

 Delgado Community College, New Orleans, Louisiana
 Chair, Computer Information Technology, since May, 2006
 Faculty, Information Systems, Business and Technology Division, since August, 2005

LAST RECENT POSITION –

 Tulane University, New Orleans, Louisiana 1989 to 2005
 Assistant Dean, University College of Tulane University

 Managing highly successful programs in computer information systems, information technology, educational technology, networking, and information security
 Responsible for management of all areas of program design, development and maintenance: faculty, curriculum, students; scheduling of classes, evaluation of students' academic records, classroom and computing resources, and support staff
 Designing and teaching a variety of courses in areas of applied computing, with emphases on: systems and design, database management, information engineering
 Managed staff and programs in multi-campus environment
 Staff position definition, announcements, searches, interviews, hiring

Staff management, performance evaluation, continuous improvement

Developed and implemented system of short-term, intermediate and long-term goals

Staff assessment, promotion, performance corrective action, dismissal

Defined and prioritized needed improvements to services and programs

Specified and prioritized needed improvements to services and programs

Designed electronic procedure for schedule preparation, avoiding conflicts and maximizing facility utilization

Improved scheduling in a multi-campus environment, with programs operating at 5 locations

Maintained professional association affiliations and university network connections to support a continuous improvement cycle in college curricula

Broadened scope of curricula to better service students, encompass wider range of faculty involvement, and better prepare students for careers

Began position with twelve academic courses, one academic program and about 50 majors; left it with over 200 majors, four academic programs and over fifty courses

Increased input from business and industry with professional advisory council

Tulane University, New Orleans, Louisiana 1979 to 1989

Technical Project Leader and Senior Systems Analyst, Tulane University Administrative Computing Center

Managed technical teams for RFPs, vendor relations, end-user services and programmer supervision

Ongoing responsibility for development, maintenance, conversion and enhancement of major information systems for University functional departments

Independent consulting for business and education in areas of database and institutional effectiveness evaluation systems

BIOGRAPHICAL SKETCH				
Name Cris Koutsougeras			Position Title Professor and Dept Head	
EDUCATION				
INSTITUTION AND LOCATION	DEGREE	YEAR	FIELD OF STUDY	
Case Western Reserve University, Cleveland, Ohio	Ph.D	1989	Computer Science	
University of Cincinnati, Cincinnati, Ohio	M.S.	1984	Computer Engineering	
National Technical University of Athens - Greece	B.S.	1983	Electrical Engineering	

Experience:
- Professor and Head, Computer Science & Industrial Technology Department, Southeastern LA University, August 2006 – currently
- NASA summer faculty, Stennis Space Center, 2005
- Associate Professor, Electrical Engineering & Computer Science Department, Tulane University, fall 1997 – July 2006
- Associate Professor, full time, Computer Science Department, Tulane University, fall 1994 - spring 1997
- Assistant Professor, full time, Computer Science Department, Tulane University, fall 1988 - spring 1994

Expertise:
Artificial Intelligence Systems (particularly subsymbolic), Neural Nets, Machine Learning, Pattern Recognition/Classification, Hardware and software design for computer interfacing, Information Technology Tools (Web), Image Processing, Robotics.

Publications:
J. Nagel, P. Trepagnier, C. Koutsougeras, P. Kinney, M. Dooner, "The Culebra algorithm for path planning and obstacle avoidance in Kat-5", International conference on Tools with AI, Washington, DC, 2006.

C. Koutsougeras, Y. Liu, R. Zheng, "Event-driven Sensor Deployment Using Self Organizing Maps", to appear at the Intl. Journal of Sensor Networks (IJSNet) - Special Issue on: "Coverage Problems in Sensor Networks"

P. Trepagnier, J. Nagel, P. Kinney, C. Koutsougeras, M. Dooner, "KAT-5: Robust systems for autonomous vehicle navigation in challenging and unknown terrain", accepted for publication at the Journal of Field Robotics, March 2006.

J. F. Vassilopoulos, C. Koutsougeras, and A. Hernandez-Acquire, "On the problem of training the Coulomb Energy Network", Intl. Journal of Artificial Intelligence Tools, Vol 11, No 4, pp 475-498, Dec. 2002

Arturo Hernandez-Aguirre, C. Koutsougeras, and B. Buckles, "Sample complexity for function learning tasks through linear neural networks", Intl. Journal n Artificial Intelligence Tools, V.11, No 4, pp 499-512, Dec. 2002

N. G. Bourbakis, S. Mertoguno, and C. Koutsougeras, "A knowledge based expert system for automatic visual VLSI reverse engineering", IEEE Trans. Systems, Man, and Cybernetics, V32, No3, pp 428-436, May 2002

C. Koutsougeras, N. G. Bourbakis, and V. Gallardo, "Reverse engineering of real PCB level design using VERILOG HDL", Intl. Journal of Engineering Intelligent Systems, V10, No 2, pp 63-68, June 2002

Funded Research

- NSF Research Initiation Award : "Training Applications and Implementation of a new Neural Net Model", 6/89-6/91
- NSF REU supplement: "Progress of the Neural Nets Approach and its impact on Machine learning", 6/90-6/91
- LA Board of Regents : "Neural Network Architectures for Signal and Image Processing", 6/89-6/91
- LA Board of Regents (BOR) : "Research and Instruction Enhancement Through Parallel Processing (Enhancement LEQSF) $140,000, 6/91-6/92.
- NSF-EPSCOR Cluster (NSF/BOR) : "Fault-tolerant neural networks: Design theories and applications", 2/92-2/95. (Lead PI of Tulane's group in the joint USL-Tulane-LSU proposal selected in the final five proposals to represent Louisiana for the national competition for NSF funds)
- National Institute for Global Environmental Changes (NIGEC) : "Spectral Methods for Measurement and Analysis of Environmental Parameters", 7/92-12/92.
- DoE: "Collaborative Research with the Institute of Radioecological Problems (Belarus Academy of Sciences, Minsk): Fate and Transport of Radionuclides in Belarus after the Nuclear Explosion at Chernobyl", 4/94-8/95.
- NASA : "Content Based Search Prototype", 4/97-6/98.
- DoD EPSCoR/BMDO : "Processing Optical Information Using Neural Nets and Evolutionary Computation", 6/1998-5/2001.
- NASA Goddard Space Flight Center : "Advanced Methods for Storage and Retrieval in Image Databases", 3/99-2/2000.
- NIGEC : "Remote Sensing of Forest Canopy Chemistry" (Feasibility Study), July 1999-June 2000.

Other Experience
Team leader of Tulane's team which developed the Gray Team's Kat-5 vehicle for DARPA's 2005 Grand Challenge (4th in the 5 autonomous vehicles that finished in the competition).

Program Chairman and member of organizing committees of IEEE and ACM international conferences; IEEE service awards, NSF panel reviewer.

BIOGRAPHICAL SKETCH

NAME Dr. Troy Kammerdiener	POSITION TITLE Assistant Professor, Dept. of Computer Science and Industrial Technology

EDUCATION

INSTITUTION AND LOCATION	DEGREE	YEAR	FIELD OF STUDY
East Texas Baptist University, Marshall, TX	B.S.	1984	Major: Mathematics, Minor: Computer Science
Tulane University, New Orleans, LA	M.S.	1991	Computer Science
Tulane University, New Orleans, LA	Ph. D.	1992	Computer Science

Relevant Experience

Dr. Kammerdiener is a computer scientist with 17 years of experience teaching computer science to undergraduate and graduate students. He joined Southeastern Louisiana University in August 2005, after serving for several years at the University of Louisiana at Monroe. While at the University of Louisiana at Monroe, Dr. Kammerdiener was awarded the Clark Williams Professorship in Communicative Software Design, which was directed at the study and development of tools to create better distance education systems. He has been active in teaching and developing new coursework for Internet programming and Internet systems administration for more than the last 10 years. At Southeastern Louisiana University, he received a BOR support grant in 2006 to implement a computer-enhanced classroom, basically a computer science teaching laboratory, which has been successfully completed and is in current operation. In fall of 2006, Dr. Kammerdiener designed a new concentration in the emerging sub-discipline of Information Technology for the Computer Science degree at Southeastern Louisiana University, which will appear in the 2007 catalog, and he is currently the chair of the Computer Science Curriculum Committee at Southeastern Louisiana University.

Employment History

Fall 2005 - Present	Assistant Professor, Southeastern Louisiana University
Spring 1998 – Spring 2005	Assistant Professor, University of Louisiana at Monroe
Fall 1997	Assistant Professor and Computer Science Department Coordinator, Keene State College
Fall 1993 - Spring 1997	Assistant Professor, Keene State College
Fall 1991 - Spring 1993	Temporary Assistant Professor, Central Michigan University

Honors and Awards

Clarke Williams, Jr. Endowed Professorship in Communicative Software Design, 2000-2003

Coached 2nd Runner-up Division II (4th Runner-up in the 3-state region) Programming Team at 2001 South Central Regional ACM Programming Contest

Coached 1st Runner-up Division II Programming Team at 1999 Southeast Regional ACM Programming Contest

Keene State College Faculty Observer to the University System of New Hampshire Board of Trustees (1996-1997)

Recent Publications and Presentations

Kammerdiener, T. (2007). Creating a High-Density Computer Enhanced Classroom. For the Proceedings of the 2007 International Conference on Frontiers in Education: Computer Science and Computer Engineering (under review).

Kammerdiener, T. and Russell, S. (2007). Pedagogical Use of a Concurrent Versioning System (CVS) in a Computer Science Curriculum. For the Proceedings of the 2007 International Conference on Frontiers in Education: Computer Science and Computer Engineering (under review).

Kammerdiener, T. (2003). A Student Project in 3D Graphics. The Journal of Computing Sciences in Colleges, Vol. 18:6, pp. 126-134.

Kammerdiener, T. and Cordova, J. (2003, March). Beyond HTML – Cascading Style Sheets, JavaScript, and the Document Object Model. Tutorial at the Consortium for Computing Sciences in Colleges Midsouth Conference, Memphis, TN.

Kammerdiener, T. (2003, March). Using Cocoon to Teach XML and XSL. Workshop at the Consortium for Computing Sciences in Colleges Midsouth Conference, Memphis, TN.

Kammerdiener, T. and Smith, L. (2000). Creating an Effective System for the Development, Submission, and Evaluation of Computer Science Class Assignments. The Journal of Computing in Small Colleges, Vol. 15:3, pp. 277-284.

Delgado
COMMUNITY COLLEGE

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March 14, 2007

Dr. Kerry Davidson
Deputy Commissioner for Sponsored
Board of Regents
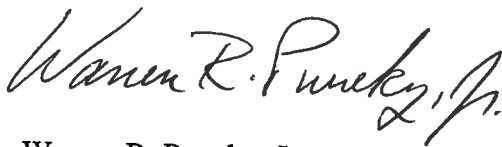1201 North Third Street
Suite 6-200
Baton Rouge, LA 70802

Dear Dr. Davidson:

Delgado Community College wholeheartedly supports this post-Katrina Support Fund Initiative to enhance our STEM offerings at the college. More specifically, the proposed project will afford the college the opportunity to revise its curricula in the Computer Information Technology program, thereby meeting the priority workforce and economic development needs of this region.

Delgado will commit personnel and lab space as detailed in the proposal budget. In addition, I expect that additional college resources will be realized as this project is implemented, and its relationship to other initiatives becomes apparent.

We thank you in advance for your consideration.

Sincerely,

Warren R. Puneky, Jr.
Dean, Business and Technology

Delgado Community College is a member of the Louisiana Community and Technical College System

AN EQUAL OPPORTUNITY EMPLOYER

SOUTHEASTERN
LOUISIANA UNIVERSITY

March 12, 2007

To whom it may concern,

The following is a letter of support and for the proposal submitted by Delgado Community College entitled *"Revised and new curricula to meet post-Katrina employment development needs of the region."* This project includes a partnership between Southeastern Louisiana University and Delgado, which is exactly the sort of relationship that we want to develop and is what the State wants us to develop as well. Moreover, the nature of this project, which us to develop infrastructure and curricula that greatly improve our Information Technology offerings. Improvement and modernization of these curricula will be of direct benefit for the local business and technology industries, and with this better trained workforce, this will help to lead to sustained economic development. Because of the seamless nature of the 2+2 curriculum, this will help to improve graduation rates for our student and get them into the workforce sooner.

As I stated earlier, this project is exactly the type of project that the four year and two year institutions are being encouraged to develop, and we welcome the opportunity to collaborate with Delgado. In summary, we feel that this project is ideally suited for the P-KSFI research program, and if funded, this will greatly help the collaborative research team to reach national prominence. As an institutional commitment, we are absorbing all of the indirect cost, and we are providing a one course reduced teaching load for the main investigators from Southeastern (Koutsougeras and Kammerdiener). I hope that this project is the start of a long and fruitful relationship between Delgado and Southeastern.

Sincerely,

Daniel McCarthy
Dean, College of Science and Technology
Southeastern Louisiana University

Contract Work Plan

A. Goals and Objectives

To support Information Technology programs at Delgado and Southeastern through:
a. Coordinated development of new curricula and appropriate modernization of existing curricular components
b. Faculty development at Delgado – including training, certifications, graduate courses, conferences, and site visits – to enable development and teaching of new and revised curricula in Information Technology areas
c. Establishment of new and enhanced lab resources at both institutions, needed to support such programs
d. The establishment of mentoring mechanisms to support 2+2 programs.

B. Deliverables

REPORT TYPE
June 30, 2008 Annual (First-Year) Project Report and Financial Status Report
June 30, 2009 Annual (Second-Year) Project Report and Financial Status Report
June 30, 2010 Annual (Third-Year) Project Report and Financial Status Report
June 30, 2011 Final Project Report
September 30, 2011 Final Expenditures Report

C. Performance Measures

a. At the End of Year 1:
   1) Delgado will have a revised curriculum in Computer Information Technology
   2) Delgado will have a totally new foundations course for students majoring in Computer Information Technology
   3) Delgado will have a new curriculum (Web Design) as a concentration within Computer Information Technology
   4) Delgado will have a general plan for an additional new curriculum (Information Technology Support) in Computer Information Technology
   5) Delgado will have a general plan for a new interdisciplinary curriculum shared with Business Studies: E-Commerce
   6) Articulation that would allow 2+2 programs will be in place
   7) Delgado will have a general plan for a 2+2 program to be offered in conjunction with Southeastern Louisiana University
   8) Southeastern will have an Information Technology lab with initially 6 Linux servers and 9 student administrator workstations
   9) Southeastern will have new courses in systems administration and web development.

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b. At the End of Year 2:
1) Delgado will have one additional new curriculum (Information Technology Support) as a concentration within Computer Information Technology
2) Delgado will have a new interdisciplinary curriculum shared with Business Studies: E-Commerce
3) Delgado will have a general plan for an additional new curriculum (Information Technology Security) in Computer Information Technology
4) Delgado and Southeastern will have a detailed proposal for a 2+2 program to be offered in by the two institutions
5) Southeastern will have revised courses in computer networking and computer security
6) Southeastern will add 6 additional servers to the Information Technology lab

c. At the End of Year 3:
1) Delgado will have one additional new curriculum (Information Technology Security) as a concentration within Computer Information Technology
2) Delgado will have a general plan for a new curriculum in Digital Media
3) Delgado and Southeastern will have completed an assessment of the first two years of the P-KSFI Funded Projects
4) Southeastern will add 10 servers to the Information Technology lab
5) Southeastern will add 3 student administrator workstations to the Information Technology lab
6) The PIs from Delgado and Southeastern will have completed the study of the 2+2 program development; included will be considerations of how the program would support accreditation at both institutions
7) Standards, procedures, and training should be in place for the tutoring and mentoring program at Southeastern. Tutoring staff will be started at 8 student tutors. It will begin general, advertised service to Delgado transfer students. Also, leveling courses will be developed to transition students from 2 year programs. Data on the preparation of Delgado students, and curricular recommendations, will be assembled from the results of the first full year of tutoring service and returned to Delgado to inform their curriculum change process.

d. At the End of Year 4:
1) Delgado will have one additional new curriculum (Digital Media) as a concentration within Computer Information Technology
2) Delgado will have a general plan for revisions and additions needed in the Computer Information Technology program
3) Southeastern will have completed the outfitting of the Information Technology lab with the remaining 4 student administrator workstations and with the remaining 10 servers and software needed for IT support as

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well as with in-house developed web interfaces that would allow students in Delgado classes to access the Information Technology lab

4) A series of specific IT class projects will be developed for each institution so that it can be supported by the IT lab

5) The tutoring and mentoring program will continue at Southeastern. The final set of feedback data to Delgado's curriculum change process will be provided.

D. Monitoring Plan

A comprehensive mid-course evaluation will be conducted by external consultants, selected by and acting under the auspices of the Board, during the third project year. Continued funding beyond the third project year will depend upon the external review's evaluation of the quality and success of project activities and the project team's ability to meet benchmarks identified in this contract and/or adapt project activities to unforeseen circumstances.

E. Utility of the Final Product

The updated, re-focused, and modernized IT related curricula at Delgado Community College and Southeastern Louisiana University will help to meet the needs and challenges of the post-Katrina reality in this region of the state of Louisiana.

Work Plan
P-KSFI 2007 - 2011
Delgado & Southeastern

A. 2007-08
1. Delgado will revise its base curriculum in Computer Information Technology
2. Delgado will develop a new foundations course for students majoring in Computer Information Technology
3. Delgado will develop a new curriculum (Web Design) as a concentration within Computer Information Technology
4. Delgado will develop a general plan for an additional new curriculum (Information Technology Support) in Computer Information Technology
5. Delgado will develop a general plan for a new interdisciplinary curriculum shared with Business Studies: E-Commerce
6. Articulation plan for 2+2 programs will be written
7. Delgado will develop a general plan for a 2+2 program to be offered in conjunction with Southeastern Louisiana University.
8. Southeastern will set up an Information Technology lab with initially 6 Linux servers and 9 student administrator workstations
9. Southeastern will develop new courses in systems administration and web development.

B. 2008-09
1. Delgado will develop one additional new curriculum (Information Technology Support) as a concentration within Computer Information Technology
2. Delgado will develop a new interdisciplinary curriculum shared with Business Studies: E-Commerce
3. Delgado will develop a general plan for an additional new curriculum (Information Technology Security) in Computer Information Technology
4. Delgado and Southeastern will develop a detailed proposal for a 2+2 program to be offered in by the two institutions
5. Southeastern will revise courses in computer networking and computer security
6. Southeastern will add 6 additional servers to the Information Technology lab.

C. 2009-2010
1. Delgado will develop one additional new curriculum (Information Technology Security) as a concentration within Computer Information Technology
2. Delgado will develop a general plan for a new curriculum in Digital Media
3. Delgado will conduct an assessment of the first two years of the P-KSFI Funded Projects
4. Southeastern will add 10 servers to the Information Technology lab
5. Southeastern will add 3 student administrator workstations to the Information Technology lab
6. The PIs from Delgado and Southeastern will have completed the study of the 2+2 course development which would support accreditation at both institutions

7.   Standards, procedures, and training will be developed for the tutoring and mentoring program at Southeastern.

D. 2010-2011
1.   Delgado will develop one additional new curriculum (Digital Media) as a concentration within Computer Information Technology

2.   Delgado will develop a general plan for revisions and additions needed in the Computer Information Technology program
3.   Southeastern will have completed the outfitting of the Information Technology lab with the remaining 4 student administrator workstations and with the remaining 10 servers and software needed for IT support as well as with in-house developed web interfaces that would allow students in Delgado classes to access the Information Technology lab
4.   A series of specific IT class projects will be developed for each institution so that it can be supported by the IT lab
5.   The tutoring and mentoring program will continue at Southeastern. The final set of feedback data to Delgado's curriculum change process will be provided

Annual Report for Year 3 (ending 6/30/2010)

New and Revised Curricula
to Meet Post-Katrina Employment Development Needs
of the Region

Delgado Community College and
Southeastern Louisiana University

P-KSFI – Primarily Education Subprogram
A Louisiana Board of Regents Sponsored Project

LEQSF(2007-11)-ENH-PKSFI-PES-01

Year Three Report
2009-2010

Section I: Personnel

List all key personnel and other staff who provided *significant* contributions to the project. Provide information about the types of contributions made by each listed participant and controls in place to ensure that these contributions are adequate to the project's requirements.

A. Principle Investigators

1. PI/PD: Dr. Warren E. Duclos, Jr., Department Chair, Computer Information Technology, Business and Technology Division, Delgado Community College

Dr. Duclos served as overall PKSFI-PE project coordinator. Given the emphasis and stipulations placed by the reviewers and by the Board of Regents on the *articulation program* component of the original proposal, Dr. Duclos dedicated the majority of his funded released-time guiding the efforts of the team in addressing the needs of this component. These included:

a. Coordinated and managed the overall budget for all sub-components of the project, including regular communications with the grant funds accountant art Delgado
b. Met with Computer Information Technology Faculty who are participating in the grant projects, to preview the three initiatives for Phase Two of the funded effort to implement "new and revised" curricula at Delgado Community College
c. Prepared and implemented a year-long plan for Year Three tasks
d. Guided Delgado Faculty in Phase Two tasks:
   1. Implementation of Phase One – especially the offering and revising of courses needed to meet the contract agreement requirements of the articulation program with Southeastern

2. Initiated contracts with Delgado Faculty to begin work on the Phase Two curricula: Information Technology Security/Assurance, Information Technology Support, and Digital Media Technologies
   e. Communicated regularly with grant accounting colleagues at Southeastern regarding invoices to be paid by grant funds
   f. Began course scheduling and staffing efforts to initiate the new articulation program
   g. Revised student advising materials regarding the new articulation program
   h. Revised marketing materials regarding the new articulation program
   i. Worked with Delgado Public Affairs to identify and implement ways to distribute information on the new articulation program
   j. Coordinated with existing Delgado information providers and internal public forums to include modules on the new articulation program
   k. Began meeting with individual students who have made progress on the new articulation program with Southeastern, informing and advising them on courses and best paths to take in completing the program.

Dr. Duclos also served as the internal Delgado project manager for all curriculum development tasks pursued at Delgado. These included:
   a. Planned all summer and contract work efforts of Delgado faculty contributing to the new and revised curricula effort
   b. Wrote specifics for a faculty member to produce a research report on "Information Technology Security/Assurance" as a prospective new program in the new and revised curricula effort
   c. Researched conferences and training options for faculty, identifying some that would be appropriate for faculty to attend
   d. Managed budgets so that available Delgado and third party funding sources might be combined in ways that would stretch the PKSFI-PE funds available
   e. Wrote new program definitions and course descriptions to be presented to the Delgado Curriculum Committee
   f. Shepherded all new and revised curricula proposals through the Department Faculty, the College's Director of Curriculum and Program Development, and the College's Curriculum Committee
   g. Negotiated release-time and contract work with Computer Information Technology Faculty working on the articulation program components and on other new and revised curricula at Delgado
   h. Assembled and Chaired a new internal Delgado working team for digital media education; led this group in exploration of ways to cooperate across departmental and divisional lines and partner with Greater New Orleans, Inc. (GNOInc.) efforts to incubate the digital media industry in the southeastern region
   i. Led faculty professional development efforts needed to support new and revised curriculum projects: in-house training and conferences.

Dr. Duclos managed and supported all faculty development efforts needed to support other curriculum development programs funded by the PKSFI-PE grant.

a. Collaborated with GNO Inc. on efforts to assure potential businesses they are trying to attract to the region in the field of digital and creative media, and thus incubate economic growth in this field
b. Worked with Delgado faculty to revise the course CMIN 244 Information Technology Security/Assurance to better meet the needs of the new certificate program
c. Worked with Delgado faculty to design the new course CMIN 246 Introduction to Information Assurance, to include key additional learning outcomes and teaching modules needed to supplement CMIN 244 for the new certificate program
d. Worked with Delgado faculty to design the new course CMIN 218 Game Structure and Character Development, to include key additional learning outcomes and teaching modules needed to supplement CMIN 217 for the incubation of the digital media and game design program offerings
e. Worked with Delgado faculty to design and develop the new Technical Certificate in Digital Media Technologies, as a first step in implementing education in this field at Delgado
f. Worked with Delgado faculty to design and develop the new Technical Certificate in Information Technology Security/Assurance, as a first step in implementing education in this field at Delgado
g. Worked with Delgado faculty to design and develop the new Technical Certificate in Information Technology Support, as a first step in implementing education in this field at Delgado

Finally, Dr. Duclos continued to be responsible for managing all hardware and software acquisitions made possible by the first year "ESIP" funding, plus some additional acquisitions made possible by Year 3 funding.
a. Coordinated with Delgado Information Technology support staff on the configuration and operational needs of faculty for the digital media lab
b. Guided support staff in the installation and configuration of the new digital media tablets and pens for use in the digital media lab
c. Specified and acquired startup cameras for use in conjunction with the digital media lab, to support the incubation of the digital media technologies program
d. Began specification and planning for use of existing laptop computers to support the new information technology security/assurance program
e. Studied ways to build synergy with additional expenditures of Delgado funds dedicated to expand the usefulness of the digital media lab
f. Collaborated with colleagues in other departments, to see whether the new equipment investments might be better utilized by a broader range of disciplines and students at Delgado – across departmental and divisional lines.

2. Co-PI: Dr. Chris Koutsougeras, Department Chair, Computer Science and Industrial Technology, College of Sciences and Technology, Southeastern Louisiana University

Dr. Koutsougeras served as project coordinator at Southeastern. In this third year of the project he contributed in two main objectives: (i) coordination of the administrative matters which facilitate the articulation plan within Southeastern LA University, and (ii) publicity of the articulation to Delgado students.

Since he is the department head of the Computer Science & Industrial Technology, the articulation agreement is to a significant extent his responsibility as it involves many aspects of the program at Southeastern. During the second year the PIs managed to resolve the issues that would allow maximal transfer of credits from Delgado to Southeastern. This year we had to account for the impact of the state-wide articulation plan and the new mandates for number of transferred hours as well as caps on the total program hours. These have been new developments which relate directly to the efforts we have been making through this project. All programs had to respond to the developments of the state-wide articulation, some with curriculum adjustments, and these developments as well as possible options were communicated by Dr. Koutsougeras to the Delgado PI Dr. Duclos and the potential impact had to be considered together with him.

Dr. Koutsougeras also worked on advertising to Delgado students the opportunity provided by this articulation. He prepared presentation materials and visited Delgado to make presentations and speak to graduating students about the opportunities of continuing for a four year degree. While the coordination, the presentation, and contact with students were completed as planned, it was evident that students need to be engaged much earlier and more actively. Dr. Koutsougeras and Dr. Duclos considered this in detail and decided to engage students through their capstone projects. The approach that was agreed is to carve some capstone projects for Delgado students from capstone projects at Southeastern, and thus require Delgado students to spend some time working with Southeastern students on projects which relate to them. At the same time, Delgado students will be given incentives to visit Southeastern and get familiar with the Southeastern environment. For this purpose Dr. Koutsougeras also met and made arrangements for the Fall 2010 semester with Mrs. Julie Bell, a Delgado instructor who serves as the coordinator for capstone projects. Since joint works among students from Delgado and Southeastern did not form in this year, tutoring support for this purpose has been rolled over for the Fall 2010 at which time senior students and graduate students at Southeastern and interested students at Delgado will be supported in common projects which will be designed in advance. However, Dr. Koutsougeras did develop a web interface to facilitate tutoring. It resides at: http://csit.selu.edu/~csit/html/delgado.html and it is linked to the home page of the CSIT department website. The interface logs tutoring requests from Delgado students and is used to track and manage tutoring activity.

In summary the major activities of Dr. Koutsougeras were:
  a. Continued effort in the implementation of the articulation project among Dr. Duclos, Dr. Koutsougeras, and Dr. Kammerdiener
  b. Dr. Koutsougeras served as the interface between the project investigators and the administration at Southeastern LA University, and provided all the administrative actions necessary to facilitate Dr. Kammerdiener's work in implementing the lab equipment updates as required for the purposes of the project
  c. Dr. Koutsougeras conducted site visits to Delgado for the purposes of the project and to promote the opportunities of the project to Delgado students

    d. Dr. Koutsougeras developed the web interface to manage and track the tutoring activity of Delgado students by Southeastern students.

3. Co-PI: Dr. Troy Kammerdiener, Chair of the Curriculum Committee, Computer Science and Industrial Technology, College of Sciences and Technology, Southeastern Louisiana University

Dr. Kammerdiener served as co-project coordinator, and director of the Network Systems Administration Laboratory (NetSAL). In this third year of the project, he contributed in NetSAL management and development, as well as some professional networking for the project. In the area of NetSAL management and development, he purchased and coordinated the physical installation of 10 new servers into the NetSAL. He also supervised the student system administration teams, which provide front-line user support services for NetSAL system users such as classes at Delgado and Southeastern. In addition, he provided direct system administration for the overall system, and for issues that were beyond the skills of the student system administrators. This included:

- Installing a new major version of Linux operating system in all servers.
- Creating automation scripts to configure and set up important subsystems for all stable servers. This allows systems to be setup (or re-setup as needed) quickly and consistently across the entire lab, and includes:
  - Basic system configuration settings and security hardening
  - Installation and configuration of email systems, including the basic email server, POP and IMAP support, and a webmail system.
  - Installation and configuration of the OTRS ticket tracking system for user support
  - Installation and configuration of a work-logging system for student system administrators and student group projects
  - Installation and configuration of a quota system
  - Setup support for the Tivoli Storage Manager for backup and restoration of student (and system) files
  - Installation and configuration of a Wiki system
  - Customization of the apache webserver to support suexec, cgi scripting support for students, a simple home page
  - Initial setup of the CVS system to support software source control for student projects and classes
  - Installation of many languages and development tools
- Updating and extending the customized account manager system which Dr. Kammerdiener wrote in the first two years of the grant, which allows account creation and tracking to be automated for NetSAL.
- Preparing for the each semester by changing all system passwords, removing old accounts and archiving their contents, and rebalancing existing instructor accounts to new servers (while preserving their contents).

In the area of professional networking for the project, Dr. Kammerdiener attended the Consortium for Computer Science in Colleges South Central regional conference, serving as a member of their steering committee. He promoted the project through personal contacts at the conference, and learned of some new techniques which may be used to improve the NetSAL facilities, including a WIKI-based Java development system.

B. Other Key Personnel – Delgado

The PKSFI project effort at Delgado is designed to involve as many faculty and staff as feasible, in order to encourage culture change regarding improvement and additions to the curriculum.

a. Course Design and Course Re-Design for New Articulation Concentration in Year Three: Cheryl Brown, Charles Hodgson, Jerry Beard, Earl Latiolais, and Gary Wallace, Instructors, Computer Information Technology, Business and Technology Division, Delgado Community College

b. Curriculum Developer (digital media program) and Course Design for New and Revised Curricula: Jerrold A. Beard, Instructor, Business and Technology Division, Delgado Community College

c. Curriculum Developer for New and Revised Curricula: Ed Drinkert, Instructor, Computer Information Technology, Business and Technology Division, Delgado Community College

d. Curriculum Developer for New and Revised Curricula, Year Three: Krista Lawrence, Instructor, Computer Information Technology, Business and Technology Division, Delgado Community College

e. Faculty development and design of instructional modules for teaching digital media technologies courses: Tracie King and Lorraine Zeringue, Instructors, Computer Information Technology, Business and Technology Division, Delgado Community College

f. Provide Extraordinary Information Technology Support in the Computer Labs: Kimberly Fontenot, Computer Lab Technicians, Office of Information Technology, Delgado Community College

g. Provide Extraordinary Clerical Support Required for Processing Forms for All Grant Efforts, as Required by Delgado: Connie Mathews, Administrative Assistant, Business and Technology Division, Delgado Community College.

Section II: Activities and Findings

A. Describe major research and educational activities undertaken in this reporting period

All curriculum development, technology enhancement, and faculty development activities were pursued to meet the performance measures specified in the final draft of the grant proposal as submitted by Delgado and Southeastern for Year Three of the PKSFI-PE project.

1. Delgado will have one additional new curriculum (Information Technology Security/Assurance) as a concentration within Computer Information Technology

Partially completed. Instructor Gary Wallace completed research on programs at similar 2-year colleges, during the first semester. A report on his research and a draft of a prospective concentration within CMIN was developed and presented to both Faculty and Professional

Advisory Board. Work continued in the second semester with design of two crucial courses for the program – one course as a revision to an existing course – resulting in only one new course.

This component of the overall project proved to be more complicated than initially expected, in that the LTCTS Board has temporarily frozen new programs. It was determined that the best way to keep moving ahead was to design a 4-course Technical certificate for submission to Curriculum and the Boards. Later, a 10-course certificate and concentration can be designed and proposed.

This effort continues in Year four.

2. Delgado will have a general plan for a new curriculum in Digital Media

Partially Completed. We were able to move up this performance measure and complete some of the work in Year Two; it was included in last year's Report.

Give the freeze by the governing boards on new programs, a formal proposal to the Delgado Community College Curriculum Committee was made, to initialize the program as a 4-course Technical Certificate.

The plan includes phasing in other curricular options for students at Delgado in the digital media field: an 10-course certificate and a concentration within the existing A.A.S. degree program in Computer Information Technology.

One of the innovative products of this funded contract has been the development, by Dr. Duclos, of a college-wide "Digital Media Team" effort. Members of the faculties of Business, Technology, and Humanities (Engineering Technology, Graphic Design, Film, and Music) have been meeting to discuss how they can coordinate efforts, avoid courses duplication, utilize each others' facilities, faculty, and equipment, and design a cross-disciplinary program in digital media.

This effort continues in Year Four.

3. Delgado and Southeastern will have completed an assessment of the first two years of the P-KSFI Funded Projects

Delgado and Southeastern have prepared all reporting materials needed for an expected formal assessment by the Board of Regents. When Dr. Duclos checked with the Board during Year Three, he learned that the formal assessment will be forthcoming that he should await notice as to when and how this would be done. Grant funds are being held in reserve to support the Board's preferred professional and methodology. We await directions from the Board.

Pending this Board-directed assessment, the Principal Investigators have completed an informal assessment of their own.

The entire Year One effort had focused primarily on planning and design of the new articulation program between Delgado and Southeastern. Other projects that had been

proposed were given secondary emphasis, because the reviewers and the Board preferred the stronger focus on the articulation program.

While beginning to implement the new articulation program in Year Two, both Delgado and Southeastern worked to also initialize other projects that had been part of the original proposal: new curricula, revised curricula, professional development for faculty, and enhancement of instructional computer and networking labs at both institutions.

4. Southeastern will add 10 servers to the Information Technology lab

Completed. Ten new servers and their KVM switches have been purchased and are in the process of installation in the Network Systems Administration Laboratory as year three closes. They will be available for use in Fall 2010.

5. Southeastern will add 3 student administrator workstations to the Information Technology lab

Completed. This objective has been completed since year one of the project. Originally student workstations were to be added gradually over the life of the grant, until a total of 16 student workstations were available for interfacing with the servers in the Network Systems Administration Laboratory. However, due to a creative agreement with Southeastern Louisiana University's Student Technology Fund, approved by the grant administrators during year one, the lab facility housing these workstations was completely populated with new workstations which satisfy our project's requirements, in return for providing furniture for the lab from the grant. As a result, the number of workstations in this lab increased sufficiently to cover the 16 workstations required by the terms of this grant, providing additional capacity for students and fulfilling the student workstation requirements completely during year one. The surplus funds are now available in years three and four for additional computing equipment and enhancements to the Network Systems Administration Laboratory. Some of these funds will be used to acquire a mobile systems administration workstation needed by the NetSAL director at the end of year three or the beginning of year four. Any other surplus funds will roll over to year four for additional enhancements to the lab.

6. The PIs from Delgado and Southeastern will have completed the study of the 2+2 program development; included will be considerations of how the program would support accreditation at both institutions.

This goal has been completed. Many of the topics involving accreditation were considered during the development of the actual articulation tables. But these topics as well as new ones were considered in relation to the "Nevers Bill" and a State-wide articulation plan. The articulation developed as part of this project is in compliance with the recommendations of the system-wide committee (with representatives from all major universities in the State). In fact it has been submitted for placement on the planned State-wide articulation website for the consideration of students and to also serve as a model for similar efforts.

Delgado: The Computer Information Technology Associate of Applied Science degree program at Delgado is accredited by The Association of Collegiate Business Schools and

Programs. Every effort has been made in designing this articulation to insure continued accreditation. This is one of the main reasons this particular component of the current grant project has been so complicated and has taken so much time and resources to design and implement.

Southeastern: In what concerns accreditation of the Computer Science program at Southeastern, the project allowed the development of NetSAL which provides required computing platforms to support various courses and to meet ABET accreditation requirements. During the 2006 accreditation visit the CS program at Southeastern was cited by ABET for being almost exclusive to the Windows operating system, and for lack of exposure of students to diverse computing platforms. The NetSAL with the substantial number of Unix/Linux servers has eliminated the criticism of lack of diversity in computing platforms and has supported more advanced projects to be employed in various classes. As an example, in the class CMPS-294 "Internet Programming" it was possible for each student to have his/her own Unix server account and carry out command-line operations on the server; students also had administrative privileges on the MySQL database. These were not possible before NetSAL because it was not possible to have individual student accounts. As a result class projects (and thus experiential learning opportunities) were limited to Windows authoring systems for the web. This example demonstrates clearly that the level of instruction is now much better because students have the opportunity to do realistic projects and be better prepared for the workforce upon graduation. Besides the service to the students and to the State's workforce, the upgrades in the equipment and the supported instruction helps us meet ABET requirements and objectives. The place where this is unambiguously evident is the fact that we had been cited for lack of computing platform diversity and with the current state of NetSAL this will no longer be an issue.

7. Standards, procedures, and training should be in place for the tutoring and mentoring program at Southeastern. Tutoring staff will be started at 8 student tutors. It will begin general, advertised service to Delgado transfer students. Also, leveling courses will be developed to transition students from 2 year programs. Data on the preparation of Delgado students, and curricular recommendations, will be assembled from the results of the first full year of tutoring service and returned to Delgado to inform their curriculum change process.

Partially completed. Dr. Koutsougeras and Dr. Duclos conducted several meetings during year three to plan for transitional students. The results of these meetings indicated that the most successful strategy for transitioning students would be to integrate them with Southeastern student research projects, and provide initial tutoring support during this activity. This would expose motivated Delgado students to the classes and student cohorts that they would be joining in a transfer to Southeastern, and would both better integrate and motivate such students. Unfortunately, by the time these plans were in place, it was too late to implement this for the Fall 2009 semester, so the plan is to roll the funds from year three into year four, and start the transitional support with this plan in Fall 2010.

This effort continues in Year Four.

B. Describe and provide data supporting the major findings resulting from these activities

1. Delgado

   The most important work efforts in year three were dedicated to teaching, assessing and tuning of new courses required for the new articulation program with Southeastern.
   a. Inclusion of the new articulation program in the College Catalog
   b. Posting of information on the articulation program on the Delgado website
   c. New brochure and poster; circulated and posted throughout the campus
   d. Beginning to store data on students who have selected the articulation program as their concentration within their Computer Information Technology major
   e. Data has been collected on the number of students declaring CMIN as a major and on the numbers of students who take the new Fundamentals course (as a gauge of indication of interest in the revised program.

   In addition to the articulation program of this grant contract, strategies have also been pursued to begin implementation of other new curricula options that were the original focus of the grant proposal.
   a. Digital Media Technologies – 4 course TCA approved by Curriculum
   b. I T Support – 4 course TCA prepared and will go to Curriculum in August
   c. I T Security/Assurance – 4 course TCA prepared and will go to Curriculum in August.

   Formal report products/outcomes of these research projects are on file in the Principle Investigator's office and are available for review.

2. Southeastern

   Agreement between Southeastern's Computer Science and Industrial Technology Department and Delgado's Information Technology Department was finalized on a complete detailed program of articulation that specifies the collaboration program between the two departments and their respective institutions.

   The Networked Systems Administration Laboratory (NetSAL) was increased to a total of 17 Linux servers and 28 workstations, 9 of which are prioritized for primary use as student administrator workstations (although all can be used for that purpose). The servers are housed in Southeastern's data center, providing them with physical security, power redundancy, and high-performance networking connections. They are controlled through KVM-over-IP connections from the Student System Administration Workstation Laboratory, which occupies a portion of the Computer Science Majors Laboratory in Fayard Hall room 125.

   In addition to the contribution of NetSAL to Southeastern alone, it is already contributing to the building of community between Southeastern and Delgado. Students at Delgado, enrolled in a variety of web design courses are being familiarized with the program and technology facilities awaiting them upon their matriculation to Southeastern. Delgado faculty are gaining an understanding of the program at Southeastern and are becoming better equipped to discuss it with their Delgado students. Some evidence of success in attracting Delgado students to use the new articulation is seen in communications with specific prospective Delgado students.

Courses in System Administration (CMPS 315), Principles of Information Assurance (CMPS 319), and Internet Programming (CMPS 294) were created (or redesigned in the case of CMPS 319) and offered for the second time in the 2008-2009 academic year. Courses in Introduction to Applied Networking (CMPS 209) and Computer Networking (CMPS 309) were created (or updated in the case of CMPS 309) and offered (or scheduled for offering) in the 2008-2009 academic year. CMPS 309, CMPS 315, and CMPS 319 included system administration and participation in the Student System Administration Teams as required components. CMPS 294 students were provided accounts on a NetSAL server, which they used to accomplish class assignments.

C. Describe the opportunities for student training and workforce development

1. Delgado

All academic and professional programs at Delgado have a focus on training and workforce development. The strength of the Associate of Applied Science program in Computer Information Technology has always been its preparation of students to enter the workforce. All work supported by this grant contribute to the revision and strengthening of this program.

Delgado continues to work with GNO Inc., both by attending regular meetings of that group's Digital Media Task Force and by forming an internal Digital Media Team to pursue cooperation with Delgado in this area. Deans of both the Business and Technology Division and the Arts and Humanities Division are now involved, together with department chairs and faculty of: film/television, graphic design, music, and engineering technologies.

Exploration in the area of game design has been promising; students are asking for more education and training opportunities in this area. But broadening the focus to "digital media" seems more appropriate for support of the regional workforce, and so we are steering our development in that direction.

New curriculum research projects in Information Security/Assurance and in Information Technology Support have been described elsewhere in this report and will continue in year three.

2. Southeastern

A System Administration Certification Program continues to be implemented in Year 3, which requires satisfactory completion of four classes that cover system administration topics, as well as four semesters of satisfactory participation with the Student System Administration Teams. This certification is backed by the reputation of Southeastern's Computer Science and Industrial Technology Department, and will be promoted among our industrial partners in the region, many of whom are major employers of our students. Several students are close to completing work on this certification.

In addition, several of these classes covering system administration topics are required for our Information Technology concentration, and several others will be using UNIX resources

provided by NetSAL, so we will be injecting students into the workforce with a much better understanding of UNIX and system administration in general.

Also, it is a fact that the NetSAL lab has now a lot more use by upper level majors, and provides higher availability of equipment. Student exit interviews indicate that students find the lab inviting and a favorite workplace in which they are now more productive.

D. Describe community development and/or outreach activities your project has undertaken

1. Delgado

Once the articulation agreement was signed, out outreach efforts focused on publicity (internal to students and external to potential students) of this new opportunity at Delgado. Brochures, flyers, and posters have been designed and produced, and are being used at a variety of Delgado public information functions.

In an effort to reach beyond the current funded grant contract, Dr. Duclos began a review of curricula at the University of New Orleans, Southern University in New Orleans, and Xavier University, with a view to offering articulation program partnerships with 4-year schools beyond the one Delgado now has with Southeastern. Specifically, invitations were made to Southern University in New Orleans and to Xavier University, to review the articulation program and consider designing one with Delgado. Discussions with Xavier are active.

While incubating potential programs in Digital Media Technologies, Information Security/Assurance, and Information Technology Support, Delgado continue to reach out to its Professional Advisory Board for recommendations and feedback as to how to best serve the region's workforce.

2. Southeastern

The project was announced in the media and this made many in the community aware of the options at Delgado and at Southeastern as well as jointly in a 2+2 program. The collaboration between Delgado and Southeastern is in itself an outreach effort. The entire project is about offering opportunities in quality education to the community in the region. After the first year which was dedicated to development, more substantial community development and outreach should be visible.

The articulation component of this project has also served to help build a sense of community between the faculties of the two institutions. Now that the sponsored articulation program has been engineered via this joint effort of the two schools, each is more aware of the other and eager to work more closely together.

E. Describe any problems encountered during the last year of project activities

This funded project included a variety of components designed to support several curricula, faculty, and technology development projects at the two institutions. All components of the proposal focused on enabling the institutions' information technology programs to better serve economic development needs in "post-Katrina" southeast Louisiana. The two academic departments offering the proposal were: Computer Information Technology ("CMIN"), housed within the Division of Business and Technology at Delgado, and the Information Technology concentration of the Computer Science program at Southeastern ("CMPS"), housed in the Computer Science & Industrial Technology Department of the College of Science and Technology.

As reported in year one, the major problems encountered occurred in the Board's preferred highest priority module of the original grant proposal: the articulation program between the two institutions – due primarily to the differences of the two programs being articulated. (See year one report) Unlike building an articulation between two business curricula or between two biology curricula, the construction of an articulation between these two very different curricula in information technology has been challenging. Information Technology at Southeastern has developed in a culture of computer science, while Information Technology at Delgado developed in a culture of business management. Specifics of the differences were reported at the end of year one.

Principle Investigators at both institutions have made every effort to reduce potential problems that may arise as a result of these differences. These efforts were describe in the report at the end of year one. What remains for the implementation phase is to see the effect these differences will have on Delgado students who pursue the articulation to Southeastern.

The original expectation of the grant proposal reviewers was that Delgado graduates would be able to transfer enough courses as to enable them to graduate from Southeastern with a four-year baccalaureate degree in a two-year timeframe. Through a variety of strategies and an overriding cooperation between the two institutions, this expectation has been met.

As this report is completed, funding for higher education is being significantly reduced by the Louisiana Legislature. While the reductions in budgets will no doubt have some impact on everyone involved in public higher education in Louisiana, there is no way to tell at this point exactly how it will impact the two institutions cooperating on this grant project. Every effort will be made to reduce the impact on the projects being supported by PKSFI funds.

Section III: Publications and Products

List any tangible products (e.g., publications, presentations at meetings, development of web pages, adoption of revised/new curricula etc.).

Please mail copies of refereed journal articles related to the project referenced in this section to Kerry Davidson, Deputy Commissioner for Sponsored Programs, at the Board of Regents.

1. Delgado
   a. Articulation Agreement – the detailed agreement regarding the PKSFI-supported articulation program has been produced and signed by officials of both institutions; it is on file and available from the Principle Investigator Dr. Duclos.
   b. New Curricula and Courses – all PKSFI-supported faculty research and position papers, as well as all master syllabi for new courses, are on file and available from the Principle Investigator Dr. Duclos. New courses and the four new concentrations appear in the latest Delgado catalog.
   c. The Web site of the Division of Business and Technology has been completely revised to represent all enhancements and revisions completed to date; all work was performed by a faculty member of the Computer Information Technology program.
   d. Brochures and posters produced using PKSFI funds include a statement crediting this contribution to financing these products; all content was provided by the Principle Investigator of the PKSFI grant program.

2. Southeastern
   a. Presentation materials used by Dr. Koutsougeras in advertising the articulation program to Delgado students.
   b. Scripts and supporting software used in administration of the NetSAL system.

Section IV: Contributions

Summarize efforts made to provide significant improvements to undergraduate science education, build institutional and community capacity, and ensure project sustainability and/or scalability.

1. Delgado

Improvements to undergraduate science education are being achieved by demonstrating how ne and revised curricula can be designed and implemented. In year three, the focus was on beginning to implement the new and revised courses needed for the new articulation program.

In addition, work on other new curricula was also continued: Digital Media Technologies, Information Technology Support, and Information Technology Security/Assurance.

Across the College, Computer Information Technology faculty are exploring ways to reduce redundancy and improve cooperation across departments and division. Some were identified and begun. We are particularly excited about these efforts and are hopeful for their success.

What has emerged from the grant-funded process is a new way of designing and implementing curricula at Delgado. Rather than design and build an entire new program of some 10 or 11 new courses all at once, this method being explored with the support of the PKSFI grant concentrates on gradual construction, using existing resources as much as possible, and on internal cooperation across department and divisions of the College. In other words, where the new cross–system, inter-college approach used to build the articulation program had demonstrated the cooperative methodology, Delgado is now trying some cross-department,

intra-college strategies, i.e., within Delgado itself, to create new learning opportunities for students.

The original proposal had focused on the collaborative development of I.T. curricula to address needs of the local business community, and on the design of the various curricular enhancements has been guided by the program's professional Advisory Board advice and feedback. Delgado's commitment continues to focus on workforce development through curricula that are strong in technical skills.

Cooperation across multiple areas of education and training not only services students but also reduces costs of education. An ability of the program to respond to future evolution of computing and information technologies – without building entire new costly structures – is ensured.

Formal articulation in information technology content areas between Delgado and Southeastern is being supported in this funded project. Already, however, the efforts of this grant effort have succeeded in jump-starting other departments within the two institutions to move toward articulation programs, demonstrating cooperation and scalability of the framework nurtured by the funding. Articulation has taken hold throughout Delgado.

Efforts continue to be worked out that will ensure project sustainability into the subsequent years of the project and after the project funding years have passed. Continued emphases on faculty development through third party funds and on use of collaborative funds by Delgado to supplement grant funds for computer lab upgrades will enable the institution to sustain programs developed during the funding period.

New program options –Digital Media Technologies, Information Technology Support, and Information Technology Security/Assurance – are under way and will be continued in year four. These prospective new programs will be designed to build cooperation and synergy across academic disciplines, and thus realize reductions of duplication of courses across departments.

This month, two Delgado faculty supported by this grant projects will go to a National Science Foundation grant-writing workshop in Reno, Nevada, The stimulus of the PKSFI project has been encouraging to faculty; Delgado has never been awarded seats at this annual workshop.

An existing computer lab at Delgado has been transformed into a state-of-the-art digital media technologies lab that will be shared with other departments, better utilizing space and reducing hardware cost duplication. Delgado has provided funds for supplementary hardware and software, for maintenance, and for upgrade costs for new equipment purchased through this PKSFI grant program. Provision of these internal institutional support funds is recognized as essential for continued success of the program supported by PKSFI.

2. Southeastern

At Southeastern LA University the new NetSAL lab has been completed and continues to be expanded as planned in the grant. This state-of-the-art lab is a contribution of this project and it has an educational impact on both the students of Southeastern as well as those of Delgado. It

provides the technology that is needed to properly run the classes and carry out the projects which are required knowledge and training for the respective professions. At Southeastern it allows the enhancement of a few different classes in information systems and information technology. For Delgado, it provides the technology needed for many classes requiring training in web development.

As part of this project, students enrolled in systems administration classes at Southeastern, offer system administration services to "clients" who are students at Delgado taking respective classes in web development and are thus in need of web services. The PIs consider this an original contribution to the methodology of student training and learning. Further, the idea of students offering system administration services was evolved into a certification program at Southeastern whereby students completing successfully such services for a certain amount of time receive a certification by the department.

Efforts to share resources and build community between 2 and 4 year schools continued in year two with: appearances at Delgado functions by Southeastern principles; by expanding NETSAL services available to Delgado faculty and students, and preparing for Southeastern students to serve as technical assistants for Delgado students.

The issue of sustainability at Southeastern was resolved by managing to place the lab in a room which is designated for Student Technology Fee (STF) supported maintenance. Southeastern LA University sets aside a small portion of registration dues for the STF program which supports the maintenance of instruction technology in the University. The lab where NetSAL was developed is designated as STF supported and thus NetSAL is not expected to have any sustainability problems.

Section V: Project Revisions

Provide a listing of and explanation for any significant changes in the work plan for upcoming year, including any changes in the amount of investigators' time devoted to the project. If you made significant changes to the project design as outline in the proposal during the past year, please list and explain the changes, the purposes for the changes, and the results.

1. Delgado

No significant changes in work plans or in the amount of investigators' time devoted to the project will occur. Changes to the original project design were implemented in years one through three, as directed by the reviewers and the Board upon approval in 2007.

No decrease in our original target outcomes or project performance measures will be needed. In fact, within the framework of the existing project additional outcomes are being realized, e.g., in digital media technologies at Delgado. As a result, new curricular concentrations are being designed over and above what was requested for funding.

At Delgado, there are some outcomes that had been expected to be completed in Year 3, but are reported here as being "partially completed"; these will be continued in Year Four. During the

Annual Report for Year 2 (ending 6/30/2009)

New and Revised Curricula
to Meet Post-Katrina Employment Development
Needs of the Region

**Delgado Community College and
Southeastern Louisiana University**

**P-KSFI – Primarily Education Subprogram
A Louisiana Board of Regents Sponsored Project**

LEQSF(2007-11)-ENH-PKSFI-PES-01

**Year Two Report
2008-2009**

Section I: Personnel

List all key personnel and other staff who provided *significant* contributions to the project. Provide information about the types of contributions made by each listed participant and controls in place to ensure that these contributions are adequate to the project's requirements.

A. Principle Investigators

1. PI/PD: Dr. Warren E. Duclos, Jr., Department Chair, Computer Information Technology, Business and Technology Division, Delgado Community College

Dr. Duclos served as overall PKSFI-PE project coordinator. Given the emphasis and stipulations placed by the reviewers and by the Board of Regents on the *articulation program* component of the original proposal, Dr. Duclos dedicated the majority of his funded released-time guiding the efforts of the team in addressing the needs of this component. These included:
   a. Circulated to the Business and Technology Dean and to the Academic Vice-Chancellor the completed articulation agreement documents needed by them before their signing
   b. Communicated regularly with colleagues at Southeastern regarding their efforts to obtain administrative signatures on the articulation documents
   c. Began adaptive course scheduling and staffing efforts to initiate the new articulation program at Delgado
   d. Wrote new catalog entry requests for consideration of the Delgado Curriculum Committee for entry in the 2009-10 Catalog
   e. Wrote advising materials regarding the new articulation program
   f. Wrote marketing materials regarding the new articulation program
   g. Worked with Delgado Public Affairs to identify and implement ways to distribute information on the new articulation program

h. Coordinated with existing information providers and public forums to include modules on the new articulation program
i. Received and compiled all recommendations from Co-Principle Investigators at Southeastern, e.g., feedback from their administrators
j. Coordinated and managed the overall budget for all sub-components of the project.

Dr. Duclos also served as the internal Delgado project manager for all curriculum development tasks pursued at Delgado. These included:

a. Planned all summer and contract work efforts of Delgado faculty contributing to the new and revised curricula effort
b. Wrote specifics for a faculty member to produce a research report on "Information Technology Support" as a prospective new program in the new and revised curricula effort
c. Wrote specifics for a faculty member to produce a research report on "Digital Media Technologies" as a prospective new program in the new and revised curricula effort
d. Researched conferences and training options for faculty, identifying some that would be appropriate for faculty to attend
e. Identified candidate community colleges and related programs for faculty to undertake site visits
f. Managed budgets so that available Delgado and third party funding sources might be combined in ways that would stretch the PKSFI-PE funds available
g. Obtained feedback and approval from other Delgado departments to be impacted by all the new and revised curricula
h. Shepherded all new and revised curricula proposals through the Department Faculty, the College's Director of Curriculum and Program Development, and the College's Curriculum Committee
i. Negotiated release-time and contract work with Computer Information Technology Faculty working on the articulation program components and on other new and revised curricula at Delgado.
j. Led faculty development efforts needed to support new and revised curriculum efforts: in-house training and conferences.

Dr. Duclos managed all faculty development efforts needed to support curriculum development programs funded by the PKSFI-PE grant.

a. Worked with Delgado faculty to revise the course CMIN 291 Systems Analysis and Design, to include key additional modules needed for the articulation
b. Worked with Delgado faculty to revise the course CMIN 203 Logic and Design I, to include key additional modules needed for the articulation
c. Worked with Delgado faculty to design and develop the new course CMIN 207 Logic and Design I, to include key supplemental modules needed for the articulation
d. Worked with Delgado faculty to design and develop the new course I.T. Customer Service/Help Desk, to include key supplemental modules needed for the new I.T. Support program
e. Worked with Delgado faculty to design and develop the new course Software Application Installation and Support, to include key supplemental modules needed for the new I.T. Support program.

Finally, Dr. Duclos continued to be responsible for managing all hardware and software acquisitions made possible by the first year "ESIP" funding.

    a. Coordinated with Information Technology support staff on the configuration and operational needs of faculty for the digital media lab

    b. Explored with various departments and divisions ways in which the new lab might serve needs beyond those of the Computer Information Technology program, to realize financial advantages of funding use

    c. Studied ways to build synergy with additional expenditures of Delgado funds dedicated to expand the usefulness of the digital media lab

    d. Collaborated with colleagues in other departments, to see whether the investment might be better utilized by a broader range of discipline and students at Delgado

    e. Collaborated with GNO Inc. on efforts to assure potential businesses they are trying to attract to the region in the field of digital and creative media, and thus incubate economic growth in this field.

2. Co-PI: Dr. Chris Koutsougeras, Department Chair, Computer Science and Industrial Technology, College of Sciences and Technology, Southeastern Louisiana University

Dr. Koutsougeras served as project coordinator at Southeastern. In this second year of the project he contributed in three main objectives: (i) coordination of the administrative matters which facilitate the articulation plan within Southeastern LA University, (ii) development of an interface which provides remote access to NetSAL servers by Delgado students and faculty, and (iii) publicity of the articulation to Delgado students.

Since he is the department head of the Computer Science & Industrial Technology, the articulation agreement is to a significant extent his responsibility as it involves many aspects of the program at Southeastern. In this second year the PIs managed to resolve the issues that would allow maximal transfer of credits from Delgado to Southeastern. This plan included certain changes in the Southeastern catalogue; mainly changes in certain course requirements and course content definitions which allows certain Delgado courses to fulfill prerequisites at Southeastern. These matters required departmental curriculum committee action which was handled by Dr. Kammerdiener, but they also required permissions from the higher administration (Dean and Provost) before these matters would be brought before the S&T College curriculum committee and subsequently to the University curriculum committee.

Dr. Koutsougeras completed the work on the development of a web interface which allows remote management of server files (in a rigid www and cgi-bin structure) for use by Delgado students and faculty. The prototype resides on a NetSAL server:

    http://shaggy.netsal.selu.edu/~ckoutsougeras/dvs

This interface is to provide server access via a web interface (as opposed to FTP or SSH) for lower level web development classes where students need a server to place web documents but do not yet have the skill to deal with a server at the level of command-line access (like SSH). This is a server access tool which is different and in addition to the full user accounts provided to Delgado students and faculty by Dr. Kammerdiener's server administration work. The interface is now fully functional with relevant documentation available. Since this interface allows Delgado faculty to control the administration of the student activities, we do expect that based on Delgado faculty feedback further functionality and expansions might be requested in

the remaining project period, however at this point the interface is functional as initially intended.

Dr. Koutsougeras also worked on advertising to Delgado students the opportunity provided by this articulation. He worked on the graphic development of advertising posters and flyers for Delgado recruiting events, and he participated in two such events at Delgado. He was one of the speakers at a career opportunities seminar at Delgado where he promoted the articulation and similarly promoted the same at a Delgado student browsing/recruitment event.

In summary the major activities of Dr. Koutsougeras were:
    a. Continued effort in the implementation of the articulation plans among Dr. Duclos, Dr. Koutsougeras, and Dr. Kammerdiener
    b. Dr. Koutsougeras served as the interface between the project investigators and the administration at Southeastern LA University
    c. Administrative actions facilitating Dr. Kammerdiener's work in completing internal (CSIT) curriculum revisions to accommodate transfers. These plans were delegated to the CSIT curriculum committee through its chairman, Dr. Kammerdiener
    d. Completed a web-based server access interface which provides yet another venue for accessing NetSAL servers by Delgado students and faculty.

3. Co-PI: Dr. Troy Kammerdiener, Chair of the Curriculum Committee, Computer Science and Industrial Technology, College of Sciences and Technology, Southeastern Louisiana University

Dr. Kammerdiener served as co-project coordinator, and director of the Network Systems Administration Laboratory (NetSAL). In this second year of the project, he contributed in three main objectives: (i) articulation and curriculum development, (ii) NetSAL management and development, and (iii) training and publicity.

In the fall of 2008, Dr. Kammerdiener (and the curriculum committee which he chairs) finished the necessary curricular changes to support the planned articulation with Delgado Community College. This included the creation of CMPS 204, CMPS 209, and changing the description of CMPS 234 to allow its use towards the major for students using it in the articulation. These changes were approved by the Southeastern University Curriculum Council in November 2009. He also spent considerable time addressing questions originating from the Dean of the College of Science and Technology and the University Provost during their consideration of the final plan for the articulation. The articulation was finally approved and signed at the end of the Spring 2009 semester.

In the area of NetSAL management and development, Dr. Kammerdiener developed an automated system for creation of student accounts on the NetSAL systems, a large project requiring over 2000 lines of code with database integration. This system was deployed for the Spring 2009 semester. In addition, he updated a CVS version control system in previous use at Southeastern for use with NetSAL accounts, and provided CVS support to classes for Spring 2009, which also implemented a major suggestion from the department's Industrial Advisory Committee. He also added a webmail interface to the NetSAL systems, and did some exploratory research which will allow future support for SSL and Java Servlets to the NetSAL

systems. Finally, he performed product research, ordered, and directed the installation of 6 additional servers to NetSAL as required by the terms of the grant.

In the area of training and publicity, in October of 2008 Dr. Kammerdiener attended Delgado Program Days at their Covington campus, meeting students one-on-one and speaking to a computer science class to promote the new articulation. In February of 2009, he held a full one-day training seminar for Delgado faculty on using the NetSAL facilities. This training resulted in increased utilization of NetSAL facilities by Delgado faculty, including some new uses in supporting a database system management class. Several other classes at Southeastern also began using NetSAL facilities, for everything from beginning web design to supporting team projects in an information systems course.

B. Other Key Personnel – Delgado

The PKSFI project effort at Delgado is designed to involve as many faculty and staff as feasible, in order to encourage culture change regarding improvement and additions to the curriculum.
   a. Curriculum Developer for New and Revised Curricula, Year Two, Fall Semester: Jerrold A. Beard, Instructor, Business and Technology Division, Delgado Community College
   b. Curriculum Developer for New and Revised Curricula, Year Two, Spring Semester: Ed Drinkert, Instructor, Computer Information Technology, Business and Technology Division, Delgado Community College
   c. Curriculum Developer for New and Revised Curricula, Year Two: Krista Lawrence, Instructor, Computer Information Technology, Business and Technology Division, Delgado Community College
   d. Course Design and Course Re-Design for New Articulation Concentration in Year Two: Cheryl Brown, Associate Professor, Computer Information Technology, Business and Technology Division, Delgado Community College
   e. Re-Design of Existing Courses for New Articulation Concentration in Year Two: Julie Bell, Instructor, Computer Information Technology, Business and Technology Division, Delgado Community College
   f. Provide Extraordinary Information Technology Support in the Computer Labs Needed in Year Two: Kendall Edwards (Fall Semester) and Kimberly Fontenot (Spring Semester), Computer Lab Technicians, Office of Information Technology, Delgado Community College
   g. New Curriculum Exploration and Concentration Designer in Year Two: Earl Latiolais, Instructor, Computer Information Technology, Business and Technology Division, Delgado Community College
   h. Provide Extraordinary Clerical Support Required for Processing Forms for All Grant Efforts, as Required by Delgado: Connie Mathews, Administrative Assistant, Business and Technology Division, Delgado Community College

Section II: Activities and Findings

A. Describe major research and educational activities undertaken in this reporting period

All curriculum development, technology enhancement, and faculty development activities were pursued to meet the performance measures specified in the final draft of the grant proposal as submitted by Delgado and Southeastern for Year Two of the PKSFI-PE project (note: two measures designed to support outcomes emphasized by the reviewers are highlighted in **bold**).

1. Delgado will have one additional new curriculum (Information Technology Support) as a concentration within Computer Information Technology

Most of this work work has been completed by Delgado. Instructor Krista Lawrence completed research on programs at similar 2-year colleges, during the first semester. A report on her research and a draft of a prospective concentration within CMIN was developed and presented to both Faculty and Professional Advisory Board. Work continued in the second semester with design of two crucial courses for the program – courses that might replace two existing courses on a 1-to-1 basis (and resulting in no new net courses).

This component of the overall project proved to be more complicated than initially expected, as the field of study can be seen as more or less technical, depending on the needs of the regional workforce. It also became problematic that the LTCTS Board has temporarily frozen new programs.

Under discussion: this could be a certificate or even a course grouping to start; it might serve the community better as a component within in the ADOT program.

Continues in year three.

2. Delgado will have a new interdisciplinary curriculum shared with Business Studies: E-Commerce

Completed. We were able to move up this performance measure and complete it in Year 1; it was included in last year's Report.

3. Delgado will have a general plan for an additional new curriculum (Information Technology Security) in Computer Information Technology

Delgado has completed the general plan; a research project and initial position paper were completed by Jerry Beard in the second semester and circulated to Faculty. It will be pursued in more detail in Year 3 and will be put before the program's Professional Advisory Board in Year 3. This component proved more complicated than was initially expected and was also made more problematic by the LCTCS Board's freeze on new programs. A variety of paths will be considered, considering the economy and funds

reductions for the College at large. This area could be a certificate to start and/or could be a cooperative program with CNET; design continues in year 3.

4. Delgado and Southeastern will have a detailed proposal for a 2+2 program to be offered in by the two institutions

Completed. This crucial component was continued from Year 1 and has been formally implemented. Comment: because the Board stipulated it, this was put on the fast track and was the program design was completed in Year 1. We continued to work on an implementation plan in Year 2, while the formal document moved through the various levels of administration at the two institutions.

By addressing issues of details questioned by administrators of both institutions as they arose, we continued to tweak the implementation plan. We achieved formal signing by administrators of both institutions during the Spring 2009 semester. We immediately began public announcements, marketing, and distribution of advising materials to students at Delgado.

5. Southeastern will have revised courses in computer networking and computer security

Completed. A new introductory level course in computer networking (CMPS 209) has been created and will be offered for the first time in Fall 2009. In addition, the course specification for existing primary course in computer networking (CMPS 309) has been updated by the curriculum committee, and elements added to its curriculum to require participation in the Student System Administration Teams which manage the NetSAL servers. The computer security course (CMPS 319) was revised for the Spring of 2008 to provide more hands-on experience using NetSAL, and a more technical orientation. This required a change in prerequisites to require programming proficiency, which was approved by the Southeastern University Curriculum Council in early 2009.

6. Southeastern will add 6 additional servers to the Information Technology lab

Completed. Six new servers and their KVM switches have been purchased and are in the process of installation in the Network Systems Administration Laboratory as year two closes. They will be available for use in Fall 2009.

B. Describe and provide data supporting the major findings resulting from these activities

1. Delgado

The most important work efforts in year two one were dedicated to completing the design of the articulation program, pursuing required administrator signatures, and preparing to launch the new articulation program.

Because we could not wait for the signatures to be placed on the document, we worked concurrently on a number of necessary tasks during the year:
   a. Details of the new courses needed for the new program

b. Sets of advising materials for students considering or entering the new program
c. Flyers for various public recruiting events for Delgado students and for prospective new students considering Delgado
d. Appearance at Delgado public events were arranged by Southeastern representatives
e. Completion of a brochure for high school student considering Delgado
f. Catalog modifications as needed to record formally all changes to the curriculum.

At last, in May 2009, all signatures were on the articulation agreement document. Signature page is attached.

Strategies have also been developed to implement the new articulation option at Delgado – as well as the other new program options – as soon as they are approved by the Louisiana Board of Regents. No problems are expected.

This year's "showcase" high school recruiting effort at Delgado demonstrated visiting high school seniors' interest in the Information Technology programs. Visiting students were encouraged to leave their names and email addresses and these will be the start of an email-based marketing effort for the new programs. Most interest centered on our explorations in the areas of game design/rich media.

Preliminary efforts were completed in the curriculum development areas of Information technology Support, Information Technology Security/Assurance, and Digital Media Technologies – all described in other sections of this report. Formal report products of these investigations are on file in the Principle Investigator's office and are available for review.

The department's professional Advisory Board has applauded the various new and revised programs as better meeting employment needs of the region.

Early indicators from students are that these new options will be popular and will better meet their educational needs. And faculty have demonstrated new energies as a result of the development funds provided for them to re-tool and modernize their curricula and course offerings. These efforts continue in year three.

2. Southeastern

Agreement between Southeastern's Computer Science and Industrial Technology Department and Delgado's Information Technology Department was finalized on a complete detailed program of articulation that specifies the collaboration program between the two departments and their respective institutions.

The Networked Systems Administration Laboratory (NetSAL) was increased to a total of 17 Linux servers and 28 workstations, 9 of which are prioritized for primary use as student administrator workstations (although all can be used for that purpose). The servers are housed in Southeastern's data center, providing them with physical security, power redundancy, and high-performance networking connections. They are controlled through KVM-over-IP connections from the Student System Administration Workstation

Laboratory, which occupies a portion of the Computer Science Majors Laboratory in Fayard Hall room 125.

In addition to the contribution of NetSAL to Southeastern alone, it is already contributing to the building of community between Southeastern and Delgado. Students at Delgado, enrolled in a variety of web design courses are being familiarized with the program and technology facilities awaiting them upon their matriculation to Southeastern. Delgado faculty are gaining an understanding of the program at Southeastern and are becoming better equipped to discuss it with their Delgado students. Some evidence of success in attracting Delgado students to use the new articulation is seen in communications with specific prospective Delgado students.

Courses in System Administration (CMPS 315), Principles of Information Assurance (CMPS 319), and Internet Programming (CMPS 294) were created (or redesigned in the case of CMPS 319) and offered for the second time in the 2008-2009 academic year. Courses in Introduction to Applied Networking (CMPS 209) and Computer Networking (CMPS 309) were created (or updated in the case of CMPS 309) and offered (or scheduled for offering) in the 2008-2009 academic year. CMPS 309, CMPS 315, and CMPS 319 included system administration and participation in the Student System Administration Teams as required components. CMPS 294 students were provided accounts on a NetSAL server, which they used to accomplish class assignments.

C. Describe the opportunities for student training and workforce development

1. Delgado

All academic and professional programs at Delgado have a focus on training and workforce development. The strength of the Associate of Applied Science program in Computer Information Technology has always been its preparation of students to enter the workforce. All work supported by this grant contribute to the revision and strengthening of this program.

Delgado continues to work with GNO Inc., both by attending regular meetings of that group's Digital Media Task Force and by forming an internal Digital Media Team to pursue cooperation with Delgado in this area. Deans of both the Business and Technology Division and the Arts and Humanities Division are now involved, together with department chairs and faculty of: film/television, graphic design, music, and engineering technologies.

Exploration in the area of game design has been promising; students are asking for more education and training opportunities in this area.

New curriculum research projects in Information Security/Assurance and in Information Technology Support have been described elsewhere in this report and will continue in year three.

2. Southeastern

A System Administration Certification Program continues to be implemented in Year 2, which requires satisfactory completion of four classes that cover system administration topics, as well as four semesters of satisfactory participation with the Student System Administration Teams. This certification is backed by the reputation of Southeastern's Computer Science and Industrial Technology Department, and will be promoted among our industrial partners in the region, many of whom are major employers of our students. Several students are close to completing work on this certification.

In addition, several of these classes covering system administration topics are required for our Information Technology concentration, and several others will be using UNIX resources provided by NetSAL, so we should be injecting students into the workforce with a much better understanding of UNIX and system administration in general. One NetSAL system was also devoted in Year 2 to providing Windows Server support for projects using ASP.Net and Microsoft SQL Server in an experimental pilot program. If it continues, it will provide the workforce with students experienced in both the programming and system administration sides of Windows Server, ASP.Net, and Microsoft SQL Server.

D. Describe community development and/or outreach activities your project has undertaken

1. Delgado

The Professional Advisory Board was totally reorganized and additional members recruited in year 1; no further enhancements were accomplished in year 2, since the bulk of work in year 2 pertained to the articulation program between Delgado and Southeastern.

Once the articulation agreement has been signed, the next outreach efforts will aim to publicize this new opportunity for Delgado students and to inform other 4-year institutions in the region of this new program at Delgado. Brochures, flyers, and posters have been designed and produced, and are being used at a variety of Delgado public information functions.

While incubating potential programs in Digital Media Technologies, Information Security/Assurance, and Information Technology Support, Delgado continue to reach out to its Professional Advisory Board for recommendations and feedback as to how to best serve the region's workforce.

2. Southeastern

The project was announced in the media and this made many in the community aware of the options at Delgado and at Southeastern as well as jointly in a 2+2 program. The collaboration between Delgado and Southeastern is in itself an outreach effort. The entire project is about offering opportunities in quality education to the community in the region. After the first year which was dedicated to development, more substantial community development and outreach should be visible.

The articulation component of this project has also served to help build a sense of community between the faculty of the two institutions. Now that the sponsored articulation program has been engineered via this joint effort of the two schools, each is more aware of the other and eager to work more closely together.

E. Describe any problems encountered during the last year of project activities

This funded project included a variety of components designed to support several curricula, faculty, and technology development projects at the two institutions. All components of the proposal focused on enabling the institutions' information technology programs to better serve economic development needs in "post-Katrina" southeast Louisiana. The two academic departments offering the proposal were: Computer Information Technology ("CMIN"), housed within the Division of Business and Technology at Delgado, and the Information Technology concentration of the Computer Science program at Southeastern ("CMPS"), housed in the Computer Science & Industrial Technology Department of the College of Science and Technology.

As reported in year one, the major problems encountered occurred in the Board's preferred highest priority module of the original grant proposal: the articulation program between the two institutions – due primarily to the differences of the two programs being articulated. (see year one report) Unlike building an articulation between two business curricula or between two biology curricula, the construction of an articulation between these two very different curricula in information technology has been challenging. Information Technology at Southeastern has developed in a culture of computer science, while Information Technology at Delgado developed in a culture of business management. Specifics of the differences were reported at the end of year one.

Principle Investigators at both institutions have made every effort to reduce potential problems that may arise as a result of these differences. These efforts were describe in the report at the end of year one. What remains for the implementation phase is to see the effect these differences will have on Delgado students who pursue the articulation to Southeastern.

The original expectation of the grant proposal reviewers was that Delgado graduates would be able to transfer enough courses as to enable them to graduate from Southeastern with a four-year baccalaureate degree in a two-year timeframe. Through a variety of strategies and an overriding cooperation between the two institutions, this expectation has been met.

As this report is completed, funding for higher education is being significantly reduced by the Louisiana Legislature. While the reductions in budgets will no doubt have some impact on everyone involved in public higher education in Louisiana, there is no way to tell at this point exactly how it will impact the two institutions cooperating on this grant project. Every effort will be made to reduce the impact on the projects being supported by PKSFI funds.

Section III: Publications and Products

List any tangible products (e.g., publications, presentations at meetings, development of web pages, adoption of revised/new curricula etc.).

Please mail copies of refereed journal articles related to the project referenced in this section to Kerry Davidson, Deputy Commissioner for Sponsored Programs, at the Board of Regents.

1. Delgado
    a. Articulation Agreement – the detailed agreement regarding the PKSFI-supported articulation program has been produced and signed by officials of both institutions; it is on file and available from the Principle Investigator Dr. Duclos.
    b. New Curricula and Courses – all PKSFI-supported faculty research and position papers, as well as all master syllabi for new courses, are on file and available from the Principle Investigator Dr. Duclos. New concentrations and courses appear in the lasts Delgado catalog.
    c. The Web site of the Division of Business and Technology has been completely revised to represent all enhancements and revisions completed to date; all work was performed by a faculty member of the Computer Information Technology program.
    d. Brochures and posters produced using PKSFI funds include a statement crediting this contribution to financing these products; all content was provided by the Principle Investigator of the PKSFI grant program.

2. Southeastern
    a. Articulation Agreement – the detailed agreement regarding the PKSFI-supported articulation program has been produced and signed by officials of both institutions; it is on file and available from Dr. Koutsougeras, co-investigator and chair of the Department of Computer Science and Industrial Technology.
    b. New Curricula and Courses – detailed specifications for PKSFI-related courses are published on the Departmental website, and descriptions of all PKSFI-related courses are available in the latest Southeastern catalog.

Section IV: Contributions

Summarize efforts made to provide significant improvements to undergraduate science education, build institutional and community capacity, and ensure project sustainability and/or scalability.

1. Delgado

   Improvements to undergraduate science education are being achieved by demonstrating how ne and revised curricula can be designed and implemented. In year two, the focus was on completion of the details of the articulation program and beginning its implementation.

In addition, however, other new curricula were also implemented: the new E-Commerce concentration and the new Web Design concentration. Furthermore, initial research projects were completed and first-cut curricula produced for potential programs in Information Security/Assurance, Information Technology Support, and Digital Media Technologies.

What emerged from the process is potentially a new way of designing and implementing curricula at Delgado. Rather than design and build an entire new program of some 10 or 11 new courses all at once, this method being explored with the support of the PKSFI grant concentrates on gradual construction, using existing resources as much as possible, and on internal cooperation across department and divisions of the College. In other words, where the new inter-college approach used to build the articulation program had demonstrated the cooperative methodology, Delgado is now trying some intra-college strategies, i.e., within Delgado itself, to create new learning opportunities for students.

The original proposal had focused on the collaborative development of I.T. curricula to address needs of the local business community, and on the design of the various curricular enhancements has been guided by the program's professional Advisory Board advice and feedback. Delgado's commitment continues to focus on workforce development through curricula that are strong in technical skills.

Cooperation across multiple areas of education and training not only services students but also reduces costs of education. An ability of the program to respond to future evolution of computing and information technologies – without building entire new costly structures – is ensured.

Formal articulation in information technology content areas between Delgado and Southeastern is being supported in this funded project. Already, however, the efforts of this grant effort have succeeded in jump-starting other departments within the two institutions to move toward articulation programs, demonstrating scalability of the framework nurtured by the funding. Because the two programs are more easily articulated, the Delgado Business Studies two-year program has been articulated to the Southeastern Business four-year degree program. The two institutions continue to work toward signing a new 2-plus-2 agreement as of this writing.

Efforts continue to be worked out that will ensure project sustainability into the subsequent years of the project and after the project funding years have passed. Continued emphases on faculty development through third party funds and on use of collaborative funds by Delgado to supplement grant funds for computer lab upgrades will enable the institution to sustain programs developed during the funding period.

New program options –Digital Media, Information Technology Support, and Information Technology Security/Assurance – are under way and will be continued in year three. These prospective new programs will be designed to build cooperation and synergy across academic disciplines, and thus realize reductions of duplication of courses across departments.

An existing computer lab at Delgado has been transformed into a state-of-the-art digital media technologies lab that will be shared with other departments, better utilizing space and reducing hardware cost duplication. Delgado has provided funds for supplementary hardware and software, for maintenance, and for upgrade costs for new equipment purchased through this PKSFI grant program. Provision of these internal institutional support funds is recognized as essential for continued success of the program supported by PKSFI.

2. Southeastern

At Southeastern LA University the new NetSAL lab has been completed and continues to be expanded as planned in the grant. This state-of-the-art lab is a contribution of this project and it has an educational impact on both the students of Southeastern as well as those of Delgado. It provides the technology that is needed to properly run the classes and carry out the projects which are required knowledge and training for the respective professions. At Southeastern it allows the enhancement of a few different classes in information systems and information technology. For Delgado, it provides the technology needed for many classes requiring training in web development.

As part of this project, students enrolled in systems administration classes at Southeastern, offer system administration services to "clients" who are students at Delgado taking respective classes in web development and are thus in need of web services. The PIs consider this an original contribution to the methodology of student training and learning. Further, the idea of students offering system administration services was evolved into a certification program at Southeastern whereby students completing successfully such services for a certain amount of time receive a certification by the department.

Efforts to share resources and build community between 2 and 4 year schools continued in year two with: appearances at Delgado functions by Southeastern principles; by expanding NETSAL services available to Delgado faculty and students, and preparing for Southeastern students to serve as technical assistants for Delgado students.

The issue of sustainability at Southeastern was resolved by managing to place the lab in a room which is designated for Student Technology Fee (STF) supported maintenance. Southeastern LA University sets aside a small portion of registration dues for the STF program which supports the maintenance of instruction technology in the University. The lab where NetSAL was developed is designated as STF supported and thus NetSAL is not expected to have any sustainability problems.

Section V: Project Revisions

Provide a listing of and explanation for any significant changes in the work plan for upcoming year, including any changes in the amount of investigators' time devoted to the project. If you made significant changes to the project design as outline in the proposal during the past year, please list and explain the changes, the purposes for the changes, and the results.

1. Delgado

   No significant changes in work plans or in the amount of investigators' time devoted to the project will occur. Changes to the original project design were implemented in year one work and in year two work, as directed by the reviewers and the Board upon approval in 2007.

   Delgado found that it could more easily complete one new curriculum, E-Commerce, in year one, but had to push implementation of Information Technology Support into year three. Development work on "digital media" was moved to the front burner, in response to opportunities to cooperate with GNO Inc. in the local community.

   No decrease in our original target outcomes or project performance measure will be needed. In fact, within the framework of the existing project additional outcomes are being realized, e.g., in digital media technologies at Delgado. As a result, new curricular concentrations are being designed over and above what was requested for funding.

2. Southeastern

   Everything is on track and no changes are anticipated.

G. Signatures

Southeastern Louisiana University

_____
Cris Koutsougeras, Department Head,
Computer Science and Industrial Technology

_____
Daniel McCarthy, Dean,
College of Science and Technology

_____
Tammy Bourg, Provost and
Vice President for Academic Affairs
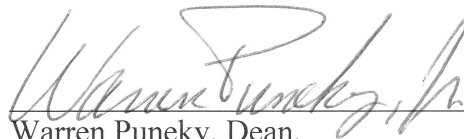
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John Crain, President

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Date   4/18/09

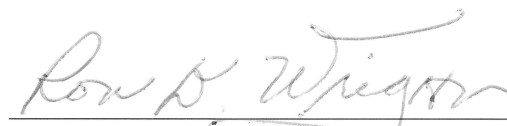**Delgado Community College**

_____
Warren Duclos, Chair,
Computer Information Technology

_____
Warren Puneky, Dean,
Division of Business and Technology

_____
Deborah Lea, Vice Chancellor,
Learning and Student Development

_____
Ron Wright, Chancellor

_____
Date   5/15/09

budget crisis of years Two and Three (College, LCTCS, and general state-wide), we experienced a hiring freeze; department faculty at Delgado were pressed into over load and over time teaching contracts in order to staff courses and meet the needs of an increased number of students. Delgado faculty members have been asked to teach their required 5 courses, plus an additional 2 or even 3, every semester of these two years. We are hopeful that the budget situation (and hiring freeze and consequential faculty overload situation) will be relieved in Year Four.

The only aspect of the project which apparently needs a change in strategy is the tutoring of Delgado students by Southeastern students. The tutoring aspect is to emphasize the BS degree option through the articulation and also is to provide assistance for transferring or potential transferring students to ease the transition and their possible needs for catching up. It turned out however, that students need to be actively engaged and become familiar with the University environment; a mere understanding of the options offered via the articulation does not alleviate the nervousness about the unknown. Through the mechanism explained in the next section, we need to change strategy in this respect and use the tutoring aspect of the project to entice potential transferring students to become familiar with the Southeastern environment and interact with Southeastern students by tying certain required activities (capstone projects) at Delgado to corresponding ones at Southeastern therefore requiring students from both institutions to interact in teams while using the tutoring program to provide support and incentives.

2. Southeastern

Everything is on track except that demand for tutoring did not develop at this stage. As it turns out, students need to be engaged much earlier than their anticipated graduation time. The plan which we have agreed to engage students actively is to use the required capstone projects to entice students from both institutions to interact in carefully chosen capstone projects. For the Fall 2010, capstone projects will be coordinated so that interested Delgado students will be able to take on projects that have been carved out of Southeastern capstone projects and support rolled over will be used to provide additional incentives for doing so and for accommodating Delgado students physically visiting Southeastern. This we expect will build confidence in the ability to deal with a university environment and facilitate more interaction and interest in the articulation options. The tutoring program will provide support for this activity and any leftover funds from this year in this item line will be used to support the expanded tutoring in the remaining project period.

We believe now that the active engagement is the best strategy. The project did not start with active engagement in the plans; the original plan was to just advertise the articulation options to Delgado students. But through active engagement we believe that there will be better results as well as the foundation to pursue continuation of this project beyond the project period through external sponsorship such as NSF-REU proposals to continue sponsoring joint capstone projects.

Annual Report for Year 1 (ending 6/30/2008)

New and Revised Curricula
to Meet Post-Katrina Employment Development
Needs of the Region

Delgado Community College and
Southeastern Louisiana University

P-KSFI – Primarily Education Subprogram
A Louisiana Board of Regents Sponsored Project

LEQSF (2007-11)-ENH-PKSFI-PES-01

Year One Report
2007-2008

Section 1: Personnel

List all key personnel and other staff who provided *significant* contributions to the project. Provide information about the types of contributions made by each listed participant and controls in place to ensure that these contributions are adequate to the project's requirements.

A. Principle Investigators

1. PI/PD: Dr. Warren E. Duclos, Jr., Department Chair, Computer Information Technology, Business and Technology Division, Delgado Community College

Dr. Duclos served as overall PKSFI-PE project coordinator. Given the emphasis and stipulations placed by the reviewers and by the Board of Regents on the *articulation program* component of the original proposal, Dr. Duclos dedicated the majority of his funded released time guiding the efforts of the team in addressing the needs of this component. These included:

a. Performed initial reviews of existing Delgado and Southeastern Information Technology academic programs
b. Researched typical articulation programs between other 2- and 4-year institutions
c. Researched Information Technology programs at other 2- and 4-year institutions
d. Researched recommendations of professional and educational associations on 2-year school Information Technology degree programs (ABET, AITP, ACM)
e. Developed multiple drafts of the working document defining the articulation program between the two schools
f. Wrote and circulated the formal articulation agreement document for signing by Delgado and Southeastern administrators

g. Received and compiled all recommendations from Co-Principle Investigators at Southeastern
h. Coordinated and managed the overall budget for all sub-components of the project.

Dr. Duclos also served as the internal Delgado project manager for all curriculum development tasks pursued at Delgado. These included:

a. Wrote multiple drafts of the revised core Computer Information Technology program, of the new articulation concentration curriculum, and of other new curriculum proposals for the Delgado Computer Information Technology faculty and Delgado administrators to review and provide feedback
b. Obtained feedback and approval from other Delgado departments to be impacted by all the new and revised curricula
c. Shepherded all new and revised curricula proposals through the Department Faculty, the College's Director of Curriculum and Program Development, and the College's Curriculum Committee
d. Obtained approvals for the new curriculum structure and for the new articulation concentration from all appropriate Delgado authorities and committees
e. Identified existing courses in Computer Information Technology that will need to be modified to meet the needs of new and revised curricula
f. Provided a definition and initial syllabus of new Delgado courses required for the new articulation curriculum
g. Developed a new foundations course in Information Technology as the first course in the major; obtained Delgado approval for the new course
h. Developed a general plan for developing a new concentration in Information Technology Support and began discussions with Faculty members to lay the groundwork for this potential new concentration
i. Negotiated release-time and contract work with Information Technology Faculty working on the articulation program components and on other new and revised curricula at Delgado.
j. Led faculty development efforts needed to support new and revised curriculum efforts: education and training, graduate courses, conferences, certification efforts, and site visits.

Dr. Duclos managed all faculty development efforts needed to support curriculum development programs funded by the PKSFI grant.

a. Researched conferences and training options for faculty, identifying some that would be appropriate for faculty to attend
b. Identified candidate community colleges and related programs for faculty to undertake site visits
c. Managed budgets so that available Delgado and third party funding sources might be combined in ways that would stretch the PKSFI funds available
d. Made a site visit to Tomball Community College, Texas, to view a program in Game Design.

Finally, Dr. Duclos was responsible for managing all hardware and software acquisitions made possible by the first year "ESIP" funding.

a. Researched other community college computer lab resources with a view to identifying appropriate upgrades to existing computer labs at Delgado, as needed to support new and revised curriculum efforts
b. Researched product availability to learn best fit for needed upgrades at Delgado
c. Identified and purchased new computer lab resources (hardware and software)
d. Negotiated pricing options with potential vendors of needed products
e. Applied for special exceptions to standard computer acquisition practices for community college in the Louisiana Community and Technology System
f. Studied ways to build synergy with expenditures of Delgado funds dedicated for hardware and software purchases
g. Identified way "third party" funding sources could be synergized into the new and revised curricula at Delgado; implemented use of these resources
h. Completed all requisition forms in accord with Delgado and Louisiana State policies
i. Worked with Receiving, Inventory and Information Technology staffs on receipt, tagging and placement of all acquisitions
j. Managed installation and implementation efforts of acquired hardware and software in computer labs.

2. Co-PI: Dr. Chris Koutsougeras, Department Chair, Computer Science and Industrial Technology, College of Sciences and Technology, Southeastern Louisiana University

Dr. Koutsougeras served as project coordinator at Southeastern. The focus of his effort was mainly the articulation agreement on the side of Southeastern LA University. Since he is the department head of the Computer Science & Industrial Technology, the articulation agreement is to a significant extent his responsibility as it involves many aspects of the program at Southeastern. These range from general catalogue requirements set by the Board, to program accreditation issues. A few alternative plans which were considered in the course of the articulation development had to be interfaced to the upper administration. At the Southeastern LA University side, the different plans which were considered were constrained by accreditation issues as well as maximizing the transferred hours from Delgado. In addition, Dr. Koutsougeras worked on the development of a web interface which allows remote management of server files (in a rigid www and cgi-bin structure) for use by Delgado students. This was intended for lower level web development classes as a solution for bulk use in courses like introduction to *html* and it is different than the development done by Dr. Kammerdiener. The major activities of Dr. Koutsougeras thus were:

a. Significant effort was expended in the development of various articulation plans among Dr. Duclos, Dr. Koutsougeras, and Dr. Kammerdiener. Many of them were not ultimately considered viable but some were tested outside the group of the three project investigators.
b. Dr. Koutsougeras served as the interface between the project investigators and the administration at Southeastern LA University. A few different aspects of the proposals

developed required negotiation with the administration (e.g. the possibility of certain transfers for non-major courses which would maximize the hours transferred).

   c. Worked out plans with Dr. Kammerdiener for internal (CSIT) curriculum revisions which would accommodate transfers. These plans were delegated to the CSIT curriculum committee through its chairman, Dr. Kammerdiener. Dr. Koutsougeras participated as a member in the curriculum committee (six faculty).

   d. Developed server side <u>original</u> code for an interface which allows students to remotely create and manage accounts on a server for the purpose of manipulating files in a www directory and in a cgi-bin directory. While this does not allow command-line access to the server, it allows students from Delgado to upload html files and cgi-bin scripts in their own directories within www and cgi-bin. This is sufficient for entry level web development classes involving instruction on html and web programming.

3. Co-PI: Dr. Troy Kammerdiener, Chair of the Curriculum Committee, Computer Science and Industrial Technology, College of Sciences and Technology, Southeastern Louisiana University

Dr. Kammerdiener served as a co-project coordinator. As chair of the Computer Science Curriculum Committee at Southeastern, he dedicated a significant amount of time assisting with the design of the articulation program component of the original proposal, as well as implementing curriculum changes needed at Southeastern to facilitate this component. These activities included:

   a. Assisting in developing multiple drafts of the working document defining the articulation program between the two schools

   b. Providing information on course specifications and ABET accreditation requirements to Principle Investigator

   c. Identification of existing courses in Computer Science that will need to be modified to meet the needs of new and revised curricula

   d. Providing a definition and initial syllabus of new Southeastern courses required for the new articulation curriculum

   e. Shepherding all new and revised curricula proposals through the Computer Science Curriculum Committee and the College of Science and Technology Curriculum Committee. Full approval has been obtained for all proposals from the Computer Science Curriculum Committee, and preliminary approval has been obtained from the College Curriculum Committee

   f. Seeking approvals for the new and revised curricula proposals from all appropriate Southeastern authorities and committees. While we have informal agreement on the necessary changes from the Dean of Science and Technology, we are still waiting on his "go-ahead" for final College Curriculum Committee approval. No problems are anticipated.

Dr. Kammerdiener also filled the post of NetSAL Supervisor. This involved several curricular and procurement activities, including:

a. Product research, specification, and procurement of necessary components for the server part of NetSAL. These included 11 servers, 11 KVM-over-IP switches, and a server rack

b. Negotiation of an agreement with Southeastern's Student Technology Fund to provide 28 new workstations in return for providing necessary new furnishings for the workstation laboratory part of NetSAL. This allowed Southeastern to immediately have a fully outfitted workstation lab in year one, rather than waiting until Years 3 and 4 to be fully populated to 16 workstations. The original proposal only called for 9 workstations in Year 1. In addition, the savings gained from this agreement allowed 5 additional servers to be purchased in Year 1 (11 instead of the planned 6)

c. Product research and specification of workstations for the workstation laboratory part of NetSAL. Southeastern's Student Technology Fund purchased workstations for this facility to these specifications, as well as providing for their continuing support

d. Product research, specification, and procurement of furnishings for the workstation laboratory part of NetSAL

e. Issuing necessary work orders and arranging for payment for electrical and networking renovations for the workstation laboratory part of NetSAL

f. Scheduling and overall supervision of various deliveries, installations, and renovations for both the server and workstation laboratory parts of NetSAL

g. Initial operating system installation and configuration of NetSAL servers

h. Creation and supervision of the Student System Administration Teams program, and initial implementation with students from Southeastern courses in Fall 2007 and Spring 2008

i. Creation of student accounts and provision of support services through the Student System Administration Teams for 3 Delgado courses in the 2007-2008 academic year

j. Integration of Student System Administration Team participation into 4 Southeastern courses in the 2007-2008 academic year

k. Integration of system administration on NetSAL servers into 3 Southeastern courses, and providing NetSAL services to students from 2 Southeastern courses and to 2 Southeastern researchers in the 2007-2008 academic year.

B. Other Key Personnel -- Delgado

1. Curriculum Developer and Course Designer for New Articulation Concentration and for Web Design Concentration: Mary E. Logan, Assistant Professor, Business and Technology Division, Delgado Community College

Professor Logan researched other community college curricula and courses, but especially the web programming course requirements of the Information Technology program at Southeastern. She attended a conference focused on this area, met with experts and faculty colleagues nationwide, and examined a variety of learning materials supporting programs in this area. She completely re-designed an existing Delgado course and designed a new one, to prepare for Delgado students expected to enroll in the articulation program.

In addition, Ms. Logan designed two other new courses for use by students in the new Web Design concentration at Delgado. This additional program has been developed for students as another focus of the overall PKSFI-PE project at Delgado.

Ms. Logan presented all the revised and new courses to the Computer Information Technology Department Faculty and to the College's Curriculum Committee for approval. She also presented the new Web Design concentration to the same groups, gaining approval for all her proposals. The concentration was then approved by the College's Vice-Chancellor for Learning and Student Development and by the Louisiana Community and Technical College System.

Finally, Ms. Logan has begun a new effort to design a complete "degree option" in Web Design. Such a program design – although not supported by this PKSFI funded project – will continue next year as a significant indirect spin-off benefit of the funding provided by this PKSFI-PE project.

2. Articulation Concentration Development, New Curriculum Exploration, and Additional Instructional Support in Year One: Bianca Gilyot, Instructor, Computer Information Technology, Business and Technology Division, Delgado Community College

Professor Gilyot is a new Faculty hire made possible by the PKSFI grant funding. Ms. Gilyot has assisted in review and re-design of the Computer Information Technology program courses, necessary for implementation of the new articulation concentration. She has also begun efforts to become certified as an Oracle Instructor for teaching Oracle database courses. She completed an online course with Oracle and is attending a week-long training seminar at the Oracle national training center in California.

In addition to providing support for the articulation concentration development, these efforts will both enhance the existing Programmer/Analyst concentration. Finally, they serve to incubate a potential new concentration in database design and development at Delgado.

This work will be continued in year two.

3. Course Design and Course Re-Design for New Articulation Concentration in Year One: Cheryl Brown, Assistant Professor, Computer Information Technology, Business and Technology Division, Delgado Community College

Professor Brown is redesigning one course and developing one entirely new course for the articulation concentration, as a summer contract. In the fall, she will have one fifth release time to continue course design work needed for the new articulation concentration.

This work is being raised to a higher priority within the overall project effort at Delgado, in view of the reviewers' directive to make the articulation concentration a highest priority objective within the original proposal.

This work will be continued in year two.

4. Re-Design of Existing Courses for New Articulation Concentration in Year One: Julie Bell, Instructor, Computer Information Technology, Business and Technology Division, Delgado Community College

Professor Bell is redesigning an existing course for the articulation concentration, as a summer contract. This work is being raised to a higher priority within the overall project effort at Delgado, in view of the reviewers' directive to make the articulation concentration a highest priority objective within the original proposal.

Ms. Bell is also researching digital media and computer game design programs, for potential implementation at Delgado.

This work will be continued in year two.

5. Provide Extraordinary Information Technology Support in the Computer Labs Needed in Year One: Joseph Rombach (Fall Semester) and Kendall Edwards (Spring Semester), Computer Lab Technicians, Office of Information Technology, Delgado Community College

Information Technology department staff have performed crucial increased work tasks in year one, to receive and install all newly acquired hardware and software provided as support of new and revised curricula at Delgado.

With funds supplied by this grant, plus additional Delgado funds dedicated to support the programs funded by this grant, an existing computer lab was completely re-outfitted to support additional programs at Delgado. Multi-media production workstations and rendering workstations were researched and purchased. They have been received and the I.T. staff is currently working to install and configure them, in preparation for the 2008-2009 academic year.

This work will be continued in year two.

6. New Curriculum Exploration and Concentration Designer in Year One: Earl Latiolais, Instructor, Computer Information Technology, Business and Technology Division, Delgado Community College

Professor Latiolais researched other community college curricula and courses, but especially the E-Commerce degree program course requirements of the Information Technology programs at other community colleges. He consulted with Business Studies Faculty at Delgado, who had been also considering a program in E-Commerce; he then designed a unique new interdisciplinary program which will serve as a model for inter-departmental cooperative efforts here.

This additional program has been developed for students as another focus of the overall PKSFI-PE project at Delgado.

Mr. Latiolais presented the new E-Commerce concentration to the Computer Information Technology Department Faculty and to the College's Curriculum Committee for approval

the same groups, gaining approval for all his proposals. The concentration was then approved by the College's Vice-Chancellor for Learning and Student Development and by the Louisiana Community and Technical College System.

Finally, Mr. Latiolais has begun a new effort to design a complete "degree option" in E-Commerce. Such a program design – although not supported by this PKSFI funded project – will continue next year as a significant indirect spin-off benefit of the funding provided by this PKSFI-PE project.

7. Provide Extraordinary Clerical Support Required for Processing Forms for All Grant Efforts, as Required by Delgado: Connie Mathews, Administrative Assistant, Business and Technology Division, Delgado Community College

Administrative support staffs have performed crucial increased work tasks in year one, to complete required forms for all extraordinary faculty contracts and request all hardware and software purchases needed to support new and revised curricula at Delgado.

This work will be continued in year two.

Section 2: Activities and Findings

A. Describe major research and educational activities undertaken in this reporting period

All curriculum development, technology enhancement, and faculty development activities were pursued to meet the performance measures specified in the final draft of the grant proposal as submitted by Delgado and Southeastern for Year One of the PKSFI-PE project (note: two measures designed to support outcomes emphasized by the reviewers are highlighted in **bold**).

1. Delgado will have a revised curriculum in Computer Information Technology

All work has been completed by Delgado. Principle Investigator Warren Duclos researched Information Technology programs nationwide, with a particular reference to articulation programs between 2-year schools and 4-year schools. He also found and reviewed the 2-year school curriculum recommendations of the Association for Computing Machinery, with its emphases on Web Design programs and Information Technology Support programs.

Dr. Duclos then developed a draft of a complete revision of the existing Delgado associate's degree program in Computer Information Technology, circulated it to Delgado faculty, received and incorporated feedback, and submitted it for approval to the Curriculum Committee. It was approved, signed by the Vice-Chancellor for Student Learning and Development, and sent to the Louisiana Community and Technical College System, which approved the re-designed curriculum.

The key value of this new curriculum is that Delgado students will have a choice of concentrations or specialty emphases within their associate degree program. The original concentration "Programmer/Analyst" remains intact.

In addition, however, new concentrations in "Web Design" and "E-Commerce" have been designed and proposed, as will be described in later sections, below.

Most importantly, a new concentration called "Technical" and developed as a 4-year school articulation option has been developed and approved by the Faculty, the Curriculum Committee, and the Vice-Chancellor at Delgado. This new option for students was fast-tracked at the direction of the review panel for this grant project and is described in detail in a later section, below.

All three of these latter concentrations for the new curriculum have been sent to the Louisiana Community and Technology System and to the Louisiana State Board of Regents for approval.

As of this writing, Delgado has completed all work and this item awaits approval of the Louisiana Board of Regents.

The implementation effort continues in year 2.

2. Delgado will have a totally new foundations course for students majoring in Computer Information Technology

Completed. Principle Investigator Warren Duclos researched Information Technology programs and their foundations course. He developed a draft of a master syllabus, circulated it to Delgado faculty, received and incorporated feedback, and submitted it for approval to the Curriculum Committee. It has been approved and was taught in the spring 2008 semester to a small group of Computer Information Technology majors. The new course is in the College Catalog, is now a required course in the revised curriculum, and will be offered regularly.

Southeastern then used this course syllabus as a model for a new course within their Information Technology program, for articulation of students transferring from Delgado. Southeastern will accept this course for transfer by Delgado Computer Information Technology graduates who transfer into the Information Technology concentrations at Southeastern.

3. Delgado will have a new curriculum (Web Design) as a concentration within Computer Information Technology

All work has been completed by Delgado. Assistant Professor Mary Logan, working under a 20% release time supported by the PKSFI grant program, researched Web Design programs nationwide and the recommendations of the Association of Computing Machinery for web design programs in 2-year schools. She also found and reviewed learning content of the Certified Internet Web Professional Program (CIW) and of the

World Organization of Webmasters (WOW), to understand the breadth and depth of curriculum recommendations of two premier professional associations.

As of this writing, this item awaits approval of the Louisiana Board of Regents.

Working within the new curricular structure approved by the Faculty, Ms. Logan then revised and designed needed courses in the web design area. She significantly redesigned two existing courses and developed two new ones. She then circulated all these to Delgado faculty, received and incorporated feedback, and submitted them for approval to the Curriculum Committee. All have been approved and signed by the Vice-Chancellor for Student Learning and Development.

The revised pair will appear in the 2008-2009 Catalog and the new ones will appear next year.

Seeking to underscore the importance of the new articulation program with Southeastern, Ms. Logan took special care to "match" the two revised courses to a single course at Southeastern. Consequently, this pair of Delgado courses was then approved for transfer as a single course in the new articulation program between the two institutions.

4. Delgado will have a general plan for an additional new curriculum (Information Technology Support) in Computer Information Technology

Completed. Principle Investigator Warren Duclos researched Information Technology programs in the area of Information Technology Support, as well as the recommendation of the Association for Computing Machinery in this area.

He developed a general plan for developing a new concentration in this area and circulated it to Delgado faculty.

Discussions with faculty and Chair of the Computer Networking Technology program (CNET) have begun, seeking ways to avoid duplication of courses and possibly develop a cross-departmental program in the area of Information Technology Support. An existing course within the CNET program was adopted by CMIN for inclusion as fundamental networking education within the CMIN program.

At Delgado's expense, 20 laptops, security cables and locks, and a secure mobile storage cart have been researched and purchase for use in this academic program.

Recommendations have been sought and received from the professional Advisory Board for the CMIN program, in support of the design of this new program. This area will be a primary focus during the 2008-2009 academic year, and will be continued in year 2 of this grant effort.

5. Delgado will have a general plan for a new interdisciplinary curriculum shared with Business Studies: E-Commerce

> All work has been completed by Delgado. As described in I.B.6, above, Delgado was able to expedite this component. The general plan was developed and the action plan expedited when initial discussions between Information Technology faculty and Business Studies faculty show a keen interest in this concept.

> After several drafts, the new concentration was approved by both faculties, presented and approved by the College Curriculum Committee and send to the state Boards for final approval.

> As of this writing, this component awaits approval of the Louisiana Board of Regents.

6. Articulation that would allow 2+2 programs will be in place

> All work has been completed by Delgado and Southeastern. Delgado and Southeastern faculty and administrators met at Southeastern in 2007 to begin discussions of a variety of options for 2+2 programs between the institutions. It was agreed that these would be beneficial to students and that efforts would be made to design such programs and to recommend them to the faculties, to the appropriate college boards and to the Board of Regents.

> In addition, the two institutions have agreed on an articulation program proposed in the curricular area of business, indicating a definite commitment to 2+2 programs between Delgado and Southeastern. As of this writing, the two institutions have agreed on the program and it has been submitted to the Board of Louisiana Community and Technical College System and to the Louisiana Board of Regents.

> A Memorandum of Understanding for the Information Technology articulation program has been signed and is included at the end of this report.

7. Delgado will have a general plan for a 2+2 program to be offered in conjunction with Southeastern Louisiana University (Note: at the recommendation of the proposal reviewers, supported by the Board, "general plan" was replaced by "completed detailed program")

> All work has been completed by Delgado and Southeastern. The project team has worked all year on this important project component, at the strong recommendation of the reviewing panel.

> Delgado and Southeastern faculty and Curriculum Committees have agreed on details of the articulation agreement. More importantly, detailed matrices of course correspondences, revisions of existing courses, and development of needed new courses have all been completed. Details of the articulation and transfer course agreements are ready for implementation. The efforts and results of this work are described elsewhere throughout this Report.

The details of the course-by-course transfer articulation are included in a planning matrix at the end of this report. This plan has been approved by the Louisiana Community & Technical College System (June 11, 2008) and has been forwarded by LCTCS to the Louisiana Board of Regents for final approval.

8. Southeastern will have an Information Technology lab with initially 6 Linux servers and 9 student administrator workstations

> Completed. This work is described in B.2, below.

9. Southeastern will have new courses in systems administration and web development.

> Completed. This work is described in B.2, below.

B. Describe and provide data supporting the major findings resulting from these activities

1. Delgado

> Most of the work in year one was dedicated to major reform of the information technology Associate of Applied Science degree curriculum at Delgado and in development of the new curricular options.
>
> Most importantly, the departmental faculty and College administrators of Delgado and Southeastern have a firm agreement on the new articulation program. A new "Technical" concentration was created at Delgado, to provide for curriculum alignment with the four-year program at Southeastern. Previously, collaboration between the two institutions was poorly defined, now the collaboration is formally institutionalized. A specific course-for-course transfer mapping was developed and is included as an Appendix to this Report.
>
> Strategies have also been developed to implement the new articulation option at Delgado – as well as the other new program options – as soon as they are approved by the Louisiana Board of Regents. No problems are expected.
>
> The department's professional Advisory Board has applauded the various new and revised programs as better meeting employment needs of the region.
>
> Early indicators from students are that these new options will be popular and will better meet their educational needs. And faculty have demonstrated new energies as a result of the development funds provided for them to re-tool and modernize their curricula and course offerings.
>
> A recent "showcase" high school recruiting effort at Delgado demonstrated visiting high school seniors' interest in the Information Technology programs. Visiting students were encouraged to leave their names and email addresses and these will be the start of an email-based marketing effort for the new programs.

Three new courses were designed to meet upgrade requirements of the new articulation program with Southeastern: CMIN 207 Logic and Design II, CMIN 232 Discrete Structures, and CMIN 254 Computer Organization. Six existing courses are being revised, also to meet needs of the new articulation program: CMIN 203 Logic and Design I, CMIN 216 Web Foundations I, CMIN 220 Web Foundations II, CMIN 211 Visual Basic I, CMIN 250 Java Programming, and CMIN 291 Systems Analysis and Design.

Additional new courses were developed for other components of this grant-supported effort to enrich the information technology curricula at Delgado. For the Programmer/Analyst concentration, CMIN 266 has been revised. For the prospective new concentration being planned in Game Design and Rich Media, two courses have been developed and approved by the Curriculum Committee: CMIN 217 Introduction to Game Design and Development and ADOT 161 Fundamentals of 3D Modeling. To further enrich the Web Design concentration, CMIN 234 Programming for the Web and CMIN 236 Database for the Web have been prepared and will be presented to the College Curriculum Committee in the fall 2008.

Preliminary efforts were completed in two other curriculum development areas: database and game design/rich media. Existing academic programs in 2-year colleges have been reviewed. In database, one faculty member is pursuing certification with the Oracle Corporation – which will give Delgado access to Oracle materials and training courses, as well as to use of Oracle software on an Oracle-maintained server. In game design/rich media, a faculty development workshop was held at Delgado for faculty interested in designing courses in this area. Both these efforts continue in year two.

In support of all the new and revised curricula, computers were replaced in an existing instructional computer lab. The computer purchases were researched to determine what will best provide the very latest appropriate technologies in a broad range of multimedia production, including modeling, sound and motion video. Costs of implementation and ongoing administration will be borne by Delgado.

A mobile laptop computing lab has also been researched and acquired, for implementation during the 2008-2009 academic year.

Plans are under way to devise data collection on student interest, course enrollment and numbers of majors in Information Technology.

This effort continues in year 2.

2. Southeastern

Agreement between Southeastern's Computer Science and Industrial Technology Department and Delgado's Information Technology Department was finalized on a complete detailed program of articulation that specifies the collaboration program between the two departments. All necessary curricular changes were approved by the Computer Science Curriculum Committee, and preliminary approval was provided by the College of Science and Technology Curriculum Committee, contingent on a "go-ahead" from the

Dean of that college. Approval from the University Curriculum Council is pending. No problems are expected.

The Networked Systems Administration Laboratory (NetSAL) was implemented with an initial 11 Linux servers and 28 workstations, 9 of which are prioritized for primary use as student administrator workstations (although all can be used for that purpose). The servers are housed in Southeastern's data center, providing them with physical security, power redundancy, and high-performance networking connections. They are controlled through KVM-over-IP connections from the Student System Administration Workstation Laboratory, which occupies a portion of the Computer Science Majors Laboratory in Fayard Hall room 125. Maintenance, housing and technical staff support costs of new equipment purchased through this grant project will be born by Southeastern.

In addition to the contribution of NetSAL to Southeastern alone, it is already contributing to the building of community between Southeastern and Delgado. Students at Delgado, enrolled in a variety of web design courses, are being familiarized with the program and technology facilities awaiting them upon their matriculation to Southeastern. Delgado faculty are gaining an understanding of the program at Southeastern and are becoming better equipped to discuss it with their Delgado students.

Courses in System Administration (CMPS 315), Principles of Information Assurance (CMPS 319), and Internet Programming (CMPS 294) were created (or redesigned in the case of CMPS 319) and offered for the first time in the 2007-2008 academic year. CMPS 315 and CMPS 319, as well as the existing Networking course (CMPS 309) included system administration and participation in the Student System Administration Teams as required components. CMPS 294 students were provided accounts on a NetSAL server, which they used to accomplish class assignments.

C. Describe the opportunities for student training and workforce development

1. Delgado

All academic and professional programs at Delgado have a focus on training and workforce development. The strength of the Associate of Applied Science program in Computer Information Technology has always been its preparation of students to enter the workforce. All work supported by this grant contribute to the revision and strengthening of this program.

Within the revised Web Design concentration, new opportunities for student internships were pursued and achieved. Students enrolled in the capstone course were placed in businesses needing technical help building web pages and web sites.

Contacts in the community for potential placement of students in internships were expanded to include governmental and nonprofit organizations. A student from the Programmer/Analyst concentration was placed, for example, in the City of New Orleans Homeland Security office, helping with database tasks needed to build records of

individuals in the City of New Orleans who might need help evacuating before a threatening hurricane.

Expansion of the professional Advisory Board was achieved to include new members from agencies dedicated to enhancing workforce development in the region: Jefferson (Parish) Workforce Business Center and GNO, Inc. (Greater New Orleans, Inc.)

Design of the new E-Commerce concentration was guided by the department's professional Advisory Board, which called for a concentration that would permit students to become more prepared for the use of computer and information technology in a variety of business functions and pursuing business on the Internet.

Explorations in the areas of game design and creative media are being pursued with the support of GNO, Inc., which is trying to incubate areas of this industry for economic development of the New Orleans Region. Being able to point to Delgado's program as a source of training and workforce development has been encouraged by GNO, Inc.

New connections have also been made with Delgado's Service Learning project, to ensure additional and continued sources of contacts for "real world" projects for students in the various concentrations being developed with the help of this project funding.

2. Southeastern

A System Administration Certification Program has been created which requires satisfactory completion of four classes that cover system administration topics, as well as four semesters of satisfactory participation with the Student System Administration Teams. This certification is backed by the reputation of Southeastern's Computer Science and Industrial Technology Department, and will be promoted among our industrial partners in the region, many of whom are major employers of our students. Several students have already begun work on this certification.

In addition, several of these classes covering system administration topics are required for our Information Technology concentration, and several others will be using UNIX resources provided by NetSAL, so we should be injecting students into the workforce with a much better understanding of UNIX and system administration in general.

D. Describe community development and/or outreach activities you project has undertaken

1. Delgado

The department's professional Advisory Board was totally reorganized and additional members recruited from a variety of businesses and organizations through the region. The Advisory Board members are pledged to continue support of efforts to revise existing and to develop new curriculum opportunities for students in Delgado's Computer Information Technology program.

As described above, these outreach activities have brought the Jefferson (Parish) Workforce Business Center and GNO, Inc. (Greater New Orleans, Inc.) into alliance with Delgado.

In addition, other new members of the professional Advisory Board have broadened community access to and involvement with Delgado's program in Computer Information Technology. The USDA's National Finance Center and U.S. Navy's SPAWAR project are two examples of major employers in the greater New Orleans area who are now represented on the Advisory Board.

Alliance with the College's Service Learning program has further opened doors for students enrolled in Computer Information Technology, exposing faculty to a network of businesses and organizations throughout the community who seek students for internships and employment opportunities.

2. Southeastern

The project was announced in the media and this made many in the community aware of the options at Delgado and at Southeastern as well as jointly in a 2+2 program. The collaboration between Delgado and Southeastern is in itself an outreach effort. The entire project is about offering opportunities in quality education to the community in the region. After the first year which was dedicated to development, more substantial community development and outreach should be visible.

The articulation component of this project has also served to help build a sense of community between the faculties of the two institutions. Now that the sponsored articulation program has been engineered via this joint effort of the two schools, each is more aware of the other and eager to work more closely together.

E. Describe any problems encountered during the last year of project activities.

This funded project included a variety of components designed to support several curricula, faculty, and technology development projects at the two institutions. All components of the proposal focused on enabling the institutions' information technology programs to better serve economic development needs in "post-Katrina" southeast Louisiana. The two academic departments offering the proposal were: <u>Computer Information Technology</u> ("CMIN"), housed within the <u>Division of Business and Technology</u> at Delgado, and the Information Technology concentration of the <u>Computer Science</u> program at Southeastern ("CMPS"), housed in the Computer Science & Industrial Technology Department of the <u>College of Science and Technology</u>.

So the problems encountered were in the differences of the two programs being articulated. Unlike building an articulation between two business curricula or between two biology curricula, the construction of an articulation between these two very different curricula in information technology has been challenging. Information Technology at Southeastern has developed in a culture of computer science, while Information Technology at Delgado

developed in a culture of business management. In the first half of year one, therefore, analyses of the differences of the two programs had to be identified:

a. Delgado's program was created to service the needs of students seeking to gain jobs in a business computing environment, while Southeastern's program aims to prepare engineers
b. Delgado's Information Technology major courses were designed to teach students specific language and tool skills, while Southeastern's major courses aimed to teach students higher level concepts suggested by the Association for Computing Machinery
c. Delgado's Information Technology major courses were designed to meet the needs of students functioning at an urban community college "open admissions" level; the courses were developed to help a wide range of student clientele achieve success, no matter the academic level at which they entered Delgado; Southeastern's Information Technology program uses admissions entry standards to assure a homogenous student population within the program
d. At Delgado, most students seek quick entry into the workforce, and so the degree program itself is an Associate of Applied Science, not the Associate of Science (the latter being the more traditional vehicle through which articulation is made to four-year schools; Southeastern's program is a traditional Bachelor of Science degree
e. Some specifics stood out as well: for example, Southeastern required a course in Assembly language of all Information Technology students while Delgado required three courses in Accounting; Southeastern's minor is keyed more directly to the vision of its program, Delgado's to its program.

Neither institution could risk abandoning its existing mission and service to students through its distinctive curriculum. Therefore, a strategy has been designed to permit both to continue to exist, while also providing new program opportunities for students.

This has been accomplished by the project team taking these steps:

a. Maintenance of the Associate of Applied Science as the Delgado degree program is being used as the vehicle for students who pursue this new articulation with Southeastern. This strategy was approved by Dr. Kerry Davidson at the Louisiana Board of Regents; the principle is that it would be pre-mature to throw out the existing degree program or to create a new one, until the institutions implement and realize an expected success of transfer students in the new effort
b. At Delgado, the Computer Information Technology program has been restructured to permit students to pursue either a business management focus or a more technical computing focus, within the same degree program
c. At Southeastern the new Information Technology program was revised to permit a new special academic minor designed to receive courses required in Delgado's program
d. Options are being created in the Southeastern major, e.g., a requirement mentioned above now reads "Assembly Language" or "Computer Organization"
e. Several existing Delgado courses are being redesigned to provide a better match to corresponding courses at Southeastern
f. In some cases, two Delgado courses will be accepted for transfer at Southeastern as the equivalent of one Southeastern course; this enables Delgado students to meet

Southeastern curriculum requirements without Delgado totally re-building its own program (which is currently demonstrating service to students in the region)

g. New courses are being developed at Delgado, to provide students with additional transfer course credits to Southeastern; e.g., "Computer Organization" (and others listed in a previous section of this report)

h. New courses are being developed at Southeastern, to provide transfer credit opportunities for Delgado students that did not exist previously

i. Mathematics, English, and other non-major course requirements were specified for students choosing to pursue this new "Technical Specialist" concentration at Delgado, in order to match requirements of the degree program at Southeastern

j. A planning matrix was designed to demonstrate exactly how courses completed in Delgado's program will transfer to Southeastern's program.

The original expectation of the grant proposal reviewers was that Delgado graduates would be able to transfer enough courses as to enable them to graduate from Southeastern with a four-year baccalaureate degree in a two-year timeframe. Through a variety of strategies and an overriding cooperation between the two institutions, this expectation has been met.

Section 3: Contributions

Summarize efforts made to provide significant improvements to undergraduate science education, build institutional and community capacity, and ensure project sustainability and/or scalability.

1. Delgado

Improvements to undergraduate science education are being achieved by demonstrating how a flexible curriculum can be designed and implemented. For example, mention has been made that Delgado students can now choose from different emphases within Computer Information Technology: more business computing on focus or more technical in focus. Another example: rather than lock in one or another programming language, or even multiple courses in programming, this project demonstrates how one curriculum can be designed to serve the needs of students in a variety of information technology tools and languages.

The original proposal had focused on the collaborative development of I.T. curricula to address needs of the local business community, and on the design of the various curricular enhancements has been guided by the program's professional Advisory Board advice and feedback. Delgado's commitment to workforce development through curricula that are strong in technical skills is secured and enhanced.

Reduction of redundancy plus multiple areas of specialization not only better services students but also reduces costs of education. An ability of the program to respond to future evolution of computing and information technologies is ensured. Provision for articulation

between two- and four-year institutions further advances both these ends, yet without reduction of services to students.

Formal articulation in information technology content areas between Delgado and Southeastern is being supported in this funded project. Already, however, the efforts of this grant effort have succeeded in jump-starting other departments within the two institutions to move toward articulation programs. Because their subject matter is more closely aligned, their two programs are more easily articulated than are our two I. T. programs; the Delgado Business Studies two-year program has been articulated to the Southeastern Business four-year degree program. The two institutions are preparing to sign a new 2-plus-2 agreement as of this writing. This further demonstrates scalability of the cultural framework nurtured by the funding and must be seen as adding value to this project.

Efforts are already in place to ensure project sustainability into the subsequent years of the project and after the project funding years have passed. Emphases on faculty development and on use of collaborative funds by Delgado to supplement grant funds for computer lab upgrades will enable the institution to sustain programs developed during the funding period.

Planning for additional new concentrations – Game Design/Rich Media and IT Support/Security – are under way and will be continued in year two. Both will be designed to build cooperation and synergy across academic disciplines, and thus realize reductions of duplication of courses across departments.

An existing computer lab at Delgado has been transformed into a state-of-the-art multi-media production lab that will be shared with other departments, better utilizing space and reducing hardware cost duplication. Delgado will provide for supplementary hardware and software, for maintenance, and for upgrade costs for new equipment purchased through this grant program. Provision of these costs is essential for success.

For Delgado, the demonstrated value of this project includes: (a) new workforce development programs in new concentrations, (b) a new opportunity for students in the form of the articulation program with Southeastern, (c) cost savings provided by sharing resources of the NetSal lab at Southeastern, and (d) new culture growth for the College in working with faculty and students of a four-year institution.

2. Southeastern

At Southeastern LA University the new NetSal lab has been completed. This state-of-the-art lab is a contribution of this project and it has an educational impact on both the students of Southeastern as well as those of Delgado. It provides the technology that is needed to properly run the classes and carry out the projects which are required knowledge and training for the respective professions. At Southeastern it allows the enhancement of a few different classes in information systems and information technology. For Delgado, it provides the technology needed for many classes requiring training in web development.

As part of this project, students enrolled in systems administration classes at Southeastern, offer system administration services to "clients" who are students at Delgado taking respective classes in web development and are thus in need of web services. The PIs consider this an original contribution to the methodology of student training and learning. Further, the idea of students offering system administration services was evolved into a certification program at Southeastern whereby students completing successfully such services for a certain amount of time receive a certification by the department.

This funded project has not only added services to students and added graduates to the local workforce, but by building a culture of cooperation between a two-year school and a four-year school, it has also built institutional and community capacity for future development in multiple areas of education.

The issue of sustainability at Southeastern was resolved by managing to place the lab in a room which is designated for Student Technology Fee (STA) supported maintenance. Southeastern LA University sets aside a small portion of registration dues for the STA program which supports the maintenance of instruction technology in the University. The lab where NetSal was developed is designated as STA supported and thus NetSal is not expected to have any sustainability problems.

Section 4: Project Revision

Provide a listing of and explanation for any significant changes in the work plan for upcoming year, including any changes in the amount of investigators' time devoted to the project. If you made significant changes to the project design as outline in the proposal during the past year, please list and explain the changes, the purposes for the changes, and the results.

1. Delgado

No changes in work plans or in the amount of investigators' time devoted to the project will occur. Changes to the original project design were implemented in this year one work, as directed by the reviewers and the Board upon approval in 2007.

No decrease in our original target outcomes or project performance measure will be needed. In fact, within the framework of the existing project additional outcomes are being realized, e.g., in database and "game design/rich media" at Delgado. This is because faculty and administrators are energized by the project and are seeing additional ways to enhance curricula at both institutions. As a result, new curricular concentrations are being realized over and above what was requested for funding.

Once the Louisiana Board of Regents has approved the curriculum as already proposed to it, there will be no problems with articulation at the end of year three.

Because we have not heard a final determination of approval from the Louisiana Board of Regents in regard to the articulation program we have proposed to the Board, contingency planning is under way for the end of year two. That is, an interim vehicle for transfer to Southeastern is being designed for Delgado students caught in completion of grant year 2 at

Delgado and not ready for formal transfer in accord with the actual articulation agreement. An optional "supplementary topics" course will be designed for such students caught in the summer of 2009; it will be taught either at Delgado or Southeastern depending on circumstances and number of students qualifying.
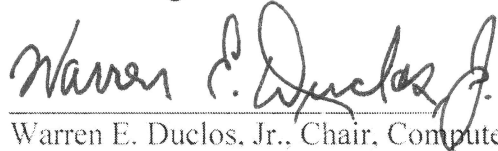
2. Southeastern

Everything is on track and no changes are anticipated.

Memorandum of Understanding
Between Delgado Community College and
Southeastern Louisiana University

The purpose of this Memorandum of Understanding (**MOU**) is to set forth the principles of the working relationship between Delgado Community College (Delgado) and Southeastern Louisiana University (Southeastern) regarding an articulation agreement in the area of Information Technology.

During the academic year 2007-2008, funded by a Louisiana Board of Regents P-KSFI/PE grant, the faculty of Delgado and Southeastern worked to design a vehicle by which a student who completes an associate of applied science degree program – with a specialized technical concentration – at Delgado can transfer smoothly into a bachelor's degree program at Southeastern. The student will then have only the junior and senior years of the bachelor's degree program to fulfill.

All work has been completed on the structure of the new articulation program and has been approved by the faculty of the respective departments. All related Delgado Computer Information Technology program revisions have been approved by the Delgado Vice Chancellor for Learning & Student Development and have been forwarded to the Louisiana Community & Technical College System and the Board of Regents for Louisiana Higher Education for review and consideration. Once these program revisions are approved, a formal articulation agreement between Delgado and Southeastern can be executed and implemented.

_____   6/23/08
Warren E. Duclos, Jr., Chair, Computer Information Technology   Date
Delgado Community College
Principle Investigator, PKSFI Grant

_____   6-23-08
Warren R. Puneky, Jr. Dean   Date
Business & Technology Division
Delgado Community College

_____   6/23/08
Cris Koutsougeras, Chair, Computer Science and Industrial Technology   Date
Southeastern Louisiana University
Co-Principle Investigator, PKSFI Grant

_____   6/23/08
Troy Kammerdiener, Assistant Professor, Computer Science   Date
and Industrial Technology
Southeastern Louisiana University
Co-Principle Investigator, PKSFI Grant

_____   6/23/08
Daniel McCarthy, Dean, College of Sciences and Technology   Date
Southeastern Louisiana University

Delgado Community College
Computer Information Technology
Business and Technology Division
CURRENT DRAFT of a Proposed "Technical Concentration" within CMIN/AAS

As of April 29, 2008

Computer Information Technology   *Information Technology*

First Semester at DCC:	Hours	Transfers to SLU:	Transfer	First Semester at SLU:	Hours
MATH 130 -- Pre-Calculus Algebra	3	See MATH 131 (2)	3	CMPS 315 -- System Administration	3
ENGL 101 -- English Composition I	3	ENGL 101	3	MATH 241 -- Statistics	3
Humanities (DCC) must be HIST 101 or 102	3	SocSci HIST 101/102 at SLU	3	CMPS 390 -- Data Structures	3
ADOT 265 -- Spreadsheet Applications	3	GBBT 220 (3)	3	BIOL 152 -- Biology Lab	1
CMIN 204 -- Fundamentals of IT&S	3	CMPS New-#1 (1)	3	CMIN 309 -- Computer Networking	3
Total Required:	**15**	**Transferred:**	**15**	**Total Required:**	**13**

Second Semester at DCC:	Hours	Transfers to SLU:	Transfer	Second Semester at SLU:	Hours
MATH 131 -- Pre-Calc Trig	3	MATH 165 (2)	3	CMPS 383 -- Information Systems	3
ENGL 102 -- English Composition II	3	ENGL 102	3	CMPS 375 -- Computer Architecture	3
ADOT 264 -- Database Applications	3	CMPS 234 (3)	3	CMPS 319 -- Prin Info Assurance	3
CMIN 203, modified as Logic and Design I	3	See CMIN New-#1 (4)	3	Science Sequence I	4
CNET 157 -- Network System Basics	3	CMPS New-#2 (1)	3	CMPS Elective (Theory Choice)	3
Total Required:	**15**	**Transferred:**	**15**	**Total Required:**	**16**

First Year Summer Session at DCC:		Transfers to SLU:	Transfer
ENGL 211, 212, 221, 222 (10)	3	ENGL 230/231/232	3
CMIN 207 New #1 -- Logic and Design II (9)	3	CMPS 161 (4) (9)	3
Total Required:	**6**	**Transferred:**	**6**

Third Semester at DCC:	Hours	Transfers to SLU:	Transfer	Third Semester at SLU:	Hours
CMIN 216, modified -- Web Foundations I	3	See CMIN 2220 (6)	3	CMPS 411 -- Software Engineering	3
CMIN 211, modified -- Visual Basic	3	See CMIN 250 (6)	3	CMPS 420 -- Human Computer Interaction	3
Arts/Social Science (DCC) Elective	3	"Pool" (5)	3	CMPS Elective (IT Choice)	3
CMIN 250, modified -- Java Programming	3	CMPS 280 (6)	3	CMPS Elective (Theory Choice)	3
Natural Science BIOL 141 (Lecture only)	3	BIOL 151 (7)	3	ENGL 322 (5)	3
Total Required:	**15**	**Transferred:**	**15**	**Total Required:**	**15**

Fourth Semester at DCC:	Hours	Transfers to SLU:	Transfer	Fourth Semester at SLU:	Hours
CMIN 291, modified -- System Anal Methods	3	CMPS 285 (6)	3	CMPS 439 -- Database Systems	3
CMIN 220, modified -- Web Foundations II	3	CMPS 294 (6)	3	CMPS 481 -- Seminar	1
CMIN 232 New-#2 -- Discrete Structures (9)	3	CMPS 257 (9)	3	CMPS 431 -- Operating Systems	3
BUSG 129 -- Intro to Business	3	MNGT 141(3)	3	Social Science or Art/Music Elective	3
BUSG 178 -- Business Communications	3	GBBT 234(8)	3	General Approved Elective	3
				Science Sequence II	4
Total Required:	**15**	**Transferred:**	**15**	**Total Required:**	**17**

Transitional Summer at DCC:	Hours	Transfers to SLU:	Transfer
Art/Music or Social Science Elective (5)	3	"Pool" (5)	3
CMIN 254 New-#3 --Computer Organization (9)	3	CMPS 290 (9)	3
Total Required:	**6**		**6**

Total DCC Hours Required:	**72**	**Transferred to SLU:** (11)	**72**	**Total SLU Hours Required for DCC Transfers:**	**61**
Subtract "2-for-1" credits			**-12**	**Total SLU Hours Required in SLU Program:**	**121**
		Transferred to SLU Program:	**60**	**Total Program Hours Required for DCC Transfe**	**133**

Students Must Follow This Program for Transfer to SLU

Special Notes in Parentheses --

(1) SLU will create equivilant courses to CMIN 157 and CMIN 204 for inclusion in 2009-2010 catalog.

(2) Delgado's MATH 130 and 131 transfer as Southeastern's MATH 165 6 credits transfer but only for 3 credits count toward degree

(3) Transfer as general electives, contingent on agreement of GBBT and MNGT at Southeastern

(4) CMIN 203 (modified) and CMIN 207 transfer as CMPS 161 for 6 credits; details in narrative; 3 credits count toward degree

(5) SLU will build a pool of courses from which DCC students will select a course in order to transfer

(6) Delgado will have to do some revisions; CMIN 211 and CMIN 250 will transfer as one course CMPS 280; CMIN 216 and CMIN 220 will transfer as CMPS 294; details in narrative; in each of these 2 cases, 6 credits transfer, but 3 count toward degree

(7)Option: Delgado students may also take BIOL 143/Lab with BIOL 141, at their discretion; it will be accepted for transfer at SLU

(8) SLU received Dean's approval to accept in place of BUGS 178 as an approved elective.

(9) Three new CMIN courses will be needed in the major at Delgado; to be developed by faculty with support funding from P-KSFI grant: CMIN 207, CMIN 232, and CMIN 254

(10) SLU needs to verify which DCC literature courses would transfer

(11) Although 72 credits transfer, only 60 count toward the degree program, due to there being 4 "2 for 1" situations, effectively losing 12 credits; cells for "lost" credits are grayed out