

STATE BOARD OF COMMUNITY COLLEGES

Virtual Computing Environment Pilot

Request: The State Board is asked to approve \$130,600 for the third year of a three-year Memorandum of Understanding with North Carolina State University for participation in a Virtual Computing Environment collaboration. This collaboration is a research and development initiative investigating the use of the Virtual Computing Environment that has been created by The North Carolina State University for use by its students and faculty members to reserve and access specialized applications remotely via the Internet.

History: The Virtual Computing Lab (VCL) is a remote access service that allows students and faculty to request or reserve a computer with a desired set of applications, and to remotely access it over the Internet. Students and faculty can use a number of advanced computer applications. Linux, Solaris, and numerous Windows environments are available. NCCCS and NC State will work with community colleges that would like to provide additional specialized software for faculty and student course access.

The Virtual Computing Environment Pilot is a research and development initiative to explore efficient and effective virtual computing modalities for online access to applications and services. This initiative is focused on developing and piloting solutions which address the growing demand for student access to advanced computing application and software services.

The initial Memorandum of Understanding included the period from January 1, 2008, through December 31, 2008, at a cost of \$631,000 to establish the Virtual Computing Environment infrastructure and a one-year maintenance fee. An additional annual payment of \$130,600 was approved by the State Board for the period from January 15, 2009 through December 31, 2009 to provide (1) maintenance fees to sustain the project and (2) support appropriate expansion of the pilot to additional community colleges.

Upon State Board approval for 2010, an additional annual payment of one hundred thirty thousand six hundred dollars (\$130,600) shall be made for ongoing costs of NC State's participation in the development and piloting of solutions for NCCCS. The Memorandum of Understanding may be terminated by NCCCS or NC State as of December 31st of any year upon 60 days written notice.

Rationale for Renewal of Memorandum of Understanding: The VCL provides NCCCS students and faculty with access to advanced computer applications through a sharing of software resources eliminating multiple purchases of specialized software. Accessing expensive software directly through VCL resources saves licensing fees. For examples: (1) Software for CIS110, MS Office 2007, is approximately \$329 per license if purchased individually by colleges or students, (2) AutoCad software is approximately \$2,000 per license. When colleges provide software by licensing via VCL, fewer licenses are required as software can be accessed from multiple PCs and can accommodate multiple courses, as long as a total user number is not exceeded. Students do not have to purchase software themselves, if licensing includes asynchronous student access.

2008, year one of the pilot:

Wake Technical Community College (WTCC) was involved in the first phase of the pilot. WTCC had 377 (unduplicated) students using the VCL for sections of CIS110 and an AutoCad course. There were 2,323 reservations for use with a total of 2,741 hours of use, showing that some students used the software for more than an hour at a time. Heavy use occurred during the final exam periods in 2008 and VCL resources overall experienced increased use throughout the year.

2009, year two of the pilot:

WTCC was supporting 72 sections of 20 separate courses using 7 different software packages spring 2009. By the end of September, 2009, 1,119 NCCCS students and faculty made 7,513 reservations using VCL resources for 11,004. Success at WTCC encouraged expansion of the pilot to other community colleges. A Request for Participation (RFP) was issued late spring 2009 to identify NCCCS institutions interested in VCL participation. Thirteen colleges submitted a proposal and all were selected. Each proposal identified courses and software needed to support them via VCL. The combined list of VCL supported courses and required software included:

Course	Software access via VCL
CET 130	Microsoft OS, Novell VMware images, Linux
CIS110, CIS111 and CIS113	Office 2007
Early Childhood Degree	Office 2007, My IT Lab/MySpanish Lab/My MathLab, RightSoft 5.9 for HVAC workforce
ELC 228	RS Logix
HIT 212	Coding SoftMed, 3M encoder/Grouper/APC
NOS 110	Windows XP Professional, Windows Vista Business, Windows Server 2003, Windows Server 2008, Unix, Linux (any version), Solaris
NOS 220	XP using Cisco VPN client; Linux using GNS3; Linux on a graphical Cisco hardware emulator using Dynamips
NOS 230 Online Faculty Certification	Windows Server 2003
NOS 240	Windows 2008 Server, Netware 6.5, and Windows XP
PCI262	LabVIEW, Festo Didactic
SMT Certificate	3ds Max, Adobe Photoshop, C# (Sharp), AutoCAD and Unity Pro 2.5
SRV210	Autodesk AutoCAD Civil 3D Land Desktop Companion, MS Word & Excel, Adjust 4.6
GIS 111	Adobe CS3 Suite, ArcGis 9.3, ArcPad 7.1, ERDAS 2.1, AutoCAD 2007, Autodesk LANDesktop 2007, Autodesk Civil 3D 2007, ENVI 4.5, Google Earth, Trimble Geomatics Office 1.63, Trimble Pathfinder Office 4.1, ArcGis Lecia Image Analysis for ArcGis 9.3, ArcGis Lecia Stereo Analyst for ArcGis 9.3, ArcGis Server 9.x, ArcSDE 9.x
WEB 111	Adobe CS4
WEB 120	Adobe Creative Suite

Phase two NCCCS institutions include Beaufort County Community College, Brunswick Community College, Cape Fear Community College, Catawba Valley Community College, Cleveland Community College, Central Piedmont Community College, Edgecombe Community College, Fayetteville Technical Community College, Forsyth Technical Community College, Guilford Technical Community College, Nash Community College, Sandhills Community College, and Surry Community College. VCL Coordinators and instructors from each of these colleges have participated in administrative, technical, and faculty training sessions. WTCC has been active in sharing their VCL expertise in conducting these training sessions in conjunction with NC State staff.

2010, year three of the pilot:

Summer 2009 through the present has been used to prepare the 13 colleges for use of VCL resources spring semester 2010, the start of year three of the pilot. These colleges are scheduled for a spring 2010 launch date for VCL support for live online and/or hybrid courses.

Method of Procurement: In accordance with the procurement practice of the State of North Carolina, there is no requirement for competition or approval by outside purchasing authorities for contracts between state agencies.

Contract Time Period and Amount: The Memorandum of Understanding is for the maintenance fee of the third year of a three-year agreement for the period of January 1, 2010, through December 31, 2010. NCCCS will compensate NC State in the amount of one hundred thirty thousand six hundred dollars (\$130,600) for the annual ongoing costs of NC State's participation in the development and piloting of solutions for NCCCS.

Fund Availability: State appropriated funds for the Virtual Computing Environment project.

Contact Persons:

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