**A Roadmap for
the Connecticut Adult Virtual High School**

**Produced by the
The Connecticut Distance Learning Consortium**

**With the CT Adult Education Center Directors**

*Updated April 2011*

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# Purpose of the Roadmap

This document is written with the intent of outlining the processes for successful resource sharing in the development of a statewide Virtual High School.

# Purpose of the CT Adult Virtual High School

The CT Adult Virtual High School (CT AVHS) is designed to provide the Adult Education Community with another option for offering ACDP, GED Study and other courses. Adult Education Centers in Connecticut do not have the same resources, community reach, or success. Web-based distance learning provides Connecticut with the benefit of a system with shared resources that is available to students across the state, regardless of where they are located, or their ability to commute to a traditional classroom setting. The professional development components of this project increase local expertise and standardize educational resources. The central delivery of student registration, course development, staff development, and program management represent a statewide improvement in learning outcomes, cost efficiencies and program equity.

The Program began in 2002-03 with a charter to create a scalable model for an online program to serve the CT Adult Credit Diploma community. Four centers (Hartford, Vernon, New London and Middletown) participated in a pilot year, from which four online courses and an Orientation to Online Learning course were produced. In September 2006, the CT AVHS became a statewide program.

The CT Adult Virtual High School's program now offers 28 half credit courses for adult credit diploma credits, an online GED study course and an online writing lab for student's to receive tutoring, and is accessed by  nearly all of the states adult education centers.

Each participating adult education center must have a trained Online Learning Coordinator to administer the program and must assign a trained Mentor to each student enrolled in an online course.  The CT Distance Learning Consortium (CTDLC) provides this training.

# Roles and Responsibilities

The AVHS Roadmap, written by the CTDLC and approved by the CT AVHS Board of Directors, guides the functionality of the CT AVHS.  The Roadmap is updated on an as-needed basis to include updates in the management, training and evaluation processes, as well as the curriculum development processes upon the approval of the Board of Directors.

The Board of Director's charter is to oversee the processes and behavior of the CT AVHS. This includes the oversight of the Central Management process of the CT AVHS as well as the quality of the resources and the products that the CT AVHS employs.

Professional Development of the CT Adult Virtual High School includes training for all new LEAs entering into the CT AVHS program. The training model is designed such that once trained, local practitioners can take responsibility for training their local colleagues. This way there is a continuous training loop that keeps the expertise alive at all locations. Practitioners are encouraged to communicate with each other across LEAs to share ideas, concerns and strategies for success.

**Course Development/Selection of published resources:**
The Content Committee approved a course standards document, adapted from the Southern Regional Education Board's policies for online curriculum, for CT AVHS use in 2005. This document, now called the iNACOL **National Standards of Quality for Online Courses** guides the standards for assessing courses that have been developed by practitioners in the field or for new courses that the CT AVHS creates. A subject matter expert will submit materials aligned with the standards rubric. The Subject matter expert/s appointed by the participating LEA directors and the CTDLC Learning Design team, together, reviews the material/s for alignment and makes suggestions for improvement before it is accepted for delivery in the CT AVHS. Each new course will be processed through the following steps:

- Standards alignment
- Learning Design consultation
- Format design for consistency of functionality
- Course breakdown structure - weekly schedule over an eight week period
- Ongoing evaluation and improvement of a course that measures
  - Student outcomes
  - Curriculum/syllabus assessment by the teacher

Each new course is archived so that there is a 'master' copy on file with the CTDLC for distribution to other teachers.

# Centralized Management Roles and Responsibilities
- Learning Management System Hosting
- Technical Support/Support Center
- Administrative Support to include the creation of a CT AVHS portal, management of the portal and the CT AVHS data, student grades, credit transfer notifications, creation and maintenance of a CT AVHS academic and events calendar, and program status and communication updates
- Student enrollment management
- Monitoring student outcomes and collecting student surveys for continuous quality improvement

- Employing and managing teachers to teach the CT AVHS courses. This includes a teacher self-assessment and curriculum delivery assessment against a quality rubric
- Coordination of the delivery of student services as needed
- Monitoring quality of delivery of curriculum
- Monitoring quality of curriculum against national online curriculum standards
- Communications among the CT AVHS Local Education Agencies (LEA) each term to report performance, progress, quality and status of the program and the students' enrollment and retention data, and any other deliverables of the CT AVHS.  This includes new course development, a schedule of trainings and activities and documentation of lessons learned, best practices and valuable resources.

## Local Education Agency/ District Roles and Responsibilities

Criteria for partnership
- Provide faculty to:
  - train and teach an online course
  - mentor online students
  - shadow/mentor new teachers as needed
- Provide and Online Learning Coordinator
- Enroll students in online courses

## Administrator Roles and Responsibilities

- **Each LEA/District must provide an Online Learning Coordinator** (OLC) to coordinate eligible faculty/staff and students into the online program. This person is the local point of contact to Central Management, and liaison for all communications regarding the online program.

- The OLC will coordinate registration and course enrollment for each student, including the verification/validation of each student's e-mail address.  This may involve establishing student email accounts with providers such as Gmail or yahoo.

- The OLC will coordinate technology needs for running the online courses and communicate that information to appropriate staff and students. Such technology needs may include but are not limited to: details of web browser requirements, browser plug-ins, sound cards, etc.

- The OLC will work with the LEA's Director and the LEA's Technology Coordinator to establish and coordinate technology literacy training and triage of the LEA's staff.

- The OLC will work with mentors and students to establish and coordinate mentor support of students. In case of absence of a mentor, the OLC will also coordinate continuing support of students served by the absent mentor.

- The OLC is an essential communication liaison to Centralized Management's staff and the LEA's staff.

- The OLC needs to be empowered to implement and communicate news and directions from the CT AVHS Executive Board.

**Online Registration Specifications & Procedures**
An Online Registration and Reporting System (ORRS) provides a transparent tool set for statewide online enrollment management including:
- Course registration (student name, email address, course, instructor)
- Waiting List Management
- Process for the creation of additional "sections"
- Add/Drop Process
- Grade Reporting

Student Registration Procedures:
- Students successfully complete the Online Orientation course
- LEA advisors (designated Mentors) select prepared students and recommend appropriate online courses
- Students are enrolled or added to the Course Wait list in the ORRS
- New cohorts of students begin at regular intervals (e.g. September, November, January, March and June)
- Mentors receive Drop information from Centralized Management for students inactive in the first week.
- New enrollees are added from Wait List to replace Drops (*during a drop/add period each term*)

New Section Creation
- When the Wait List reaches an agreed upon number, a New Section is created.
  - An Instructor is identified and enrolled in the course
  - Students are enrolled from the Wait List

Operating Principles
- Sections will have student enrollment limits
- Students will NOT receive partial credit for online courses
- Enrollment from the Wait Lists will be on a first come, first served basis
- Enrollment credit will remain with the LEA from which the student comes
- A cost/enrollment will be assigned (*to be determined, currently Grant funded*)

# Student Roles and Responsibilities

- Before students are allowed to enroll in an online course, they must first complete the Online Student Orientation Course which is a rigorous exposure to online learning. If they make it through the orientation course, not only will they be fully informed as to what to expect, they will also know what is expected of them.

- Students must have met with an advisor before being enrolled (i.e., they can't enroll themselves)

- Students must have already completed at least one Adult Education course at their local LEA so that they will be apprised of local policies and be familiar with people and procedures.

- Students must agree to adhere to the following weekly activities:

- A student will meet with a local counselor, review and agree to follow the Weekly Activities required of them in order to take an online course.

- A student will be assigned a local Mentor who will oversee him/her but will not do any of the student's work. The student will be contacted by the Mentor and will arrange for a mutually convenient time, format (phone, email or face to face) and schedule for regular contact.

- Students will be in contact with their Mentor at least once per week. This is a time to review the student's progress and work schedule and discuss/initiate strategies for effectiveness. The Mentor will also answer logistical questions, tutor the student or assist with appropriate learning resources as is necessary and provide encouragement.

  - In their initial meeting, the Student and Mentor will visit the course calendar and the syllabus to establish a workable schedule for completion of the course requirements.

  - The student will also review the assessment rubrics with the Mentor.

  - Students will log into the course and follow the course readings and complete course assignments every week, for the 8 week period that the course is offered.

- Students will keep up with the course by:
  - Using the Messaging tool to contact the teacher to let him/her know they are beginning the course. **(Identify themselves by name in all messages and homework)**

- Logging into the course and checking for announcements **at least every other day**. (If Tuesdays and Thursdays, a day in the weekend is also recommended).

- Checking for course messages **at least every other day**. (If Tuesdays and Thursdays, a day in the weekend is also recommended).

- Replying to messages and teacher's discussion questions promptly.

- Completing assignments that their teachers post to the course **on time** every week.

- Asking the teacher questions when they are unsure about an assignment. Messaging or calling the teacher if the phone number is listed on the course.

- Signing up for regular times to attend their local computer lab. Notifying the lab proctors if they will not be attending because they are working on a computer elsewhere.

- If they have any technical questions about where or how to submit their online assignments or how to save their work in electronic files, contact their Mentor immediately.

- Have a backup plan for access to a computer.

## Teacher Roles and Responsibilities

Candidates for online instructional roles need the following qualifications:
- CT Certification in the subject area they will teach.
- Experience with Connecticut Adult Credit Diploma Program students & programs.
- Demonstrable competence with standard internet tools (i.e. email, web searches, Word processing, file organization, and anti-virus procedures).
- Home computer with a robust internet connection.
- Strong writing skills combined with a commitment to non-verbal communication with students.
- Time (not measured in standard course block)

*Training Process* (may be concurrent)
- All online teachers must take an online course in online instruction.

*Professional Development* (the online course will include)
What's expected of an online instructor?
- Instructor Role
- Supporting Students
- Communication with Mentors and Students

Learning Management System: Blackboard
- Organizing your course
- Communication Tools
- Assessment Tools
- Faculty Information
- Changing your course
- Grade book

**Time needed:** Approximately 7 hours

*Additional Online Professional Development*
Additional online courses in online instruction are available at no cost to the teachers that are working for the program. There is a fee for corresponding CEUs.

# Mentor Roles and Responsibilities

**Mentor's Weekly Activities**
The Mentor works with the student to help him or her to fulfill the course requirements, but will **not** do any of the student's work for him or her.

When a student is enrolled in an online course, the local Online Learning Coordinator (OLC) will assign a Mentor to that student.

The Mentor will be notified by the local OLC that a new student has been enrolled.

The Mentor will contact that student immediately to arrange for a mutually convenient time, format (phone, email, or face to face) and schedule for regular contact.

Mentors will be in contact with students **at least once per week**. This is a time to review the student's progress and work schedule and discuss/initiate strategies for effectiveness. The Mentor will also answer logistical questions, tutor the student if possible or assist with appropriate learning resources as is necessary and provide encouragement.

Mentors will log into the Course and become familiar with the navigation of the course and the course requirements.

In their initial meeting, the Mentor and Student will visit the course calendar and the syllabus to establish a workable schedule for completion of the course requirements. Mentors will also review the assessment rubrics with the student. (Teachers must communicate to the Mentors where the rubrics have been placed in the course.) Mentors will provide any additional course supplies to the student, i.e. books, binders, handouts, etc.

The Mentor will track the student's progress regularly by:
- Checking **email**, **course announcements** and the **teacher communication forum** at **least every other day**. The Mentor must log into the course to check

the announcements and the teacher forum. (If Tuesdays and Thursdays, a day in the weekend is also recommended).
- Replying to email and the teacher forum questions promptly – making sure to include your electronic signature with each communication.
- If emailing a student, cc the teacher on important communications.
- The Mentor will contact the course teacher immediately when it is clear that the student is not going to continue in the course and when there are student issues that the teacher should be aware of. The OLC will be cc'd.
- The Mentor will visit the student grade book and corrected assignments, teacher comments **with the student** weekly.

**Mentor Preparation for Online Courses**
Candidates for mentor roles should have the following qualities and experiences:
- Experience with Connecticut Adult Credit Diploma Program students & programs.
- Demonstrable competence with standard Internet tools (i.e. e-mail, web searches, Word processing, file organization, and anti-virus procedures).
- Tutoring experience (working with students taking courses led by someone else).
- Completion of the Orientation course.
- Access to the Mentor e-mail and log in identity for the LEA.
- Familiarity with Blackboard and the various online courses.

*Process* (may be concurrent)
- 1 professional development workshop (*see below*).

*Professional Development*
- Workshop 1: Facilitator Mentor Training
  (see *Mentor Agenda* for detailed description of workshop)
    - Using the Technology
    - Mentor-Student relationship
    - Mentor-Teacher relationship
    - Case Studies
    - Mentor Profile

**Time needed:** Approximately ½ day

*Deliverables*
- A report describing how previous student support experiences can be used to support online students. Specific sections on strategies for communication with online teachers and strengthening student commitment are required.
- A signed copy of the *Mentor Guidelines*.
- A case study due after the first semester of mentoring.

# Selection of New Online Curriculum

*Team Prerequisites*

Participants in a Curriculum Selection team should have the following:

- CT Certification in the subject area they are investigating.
- Demonstrable competence with standard internet tools (i.e. email, web searches, Word processing, file organization, and anti-virus procedures).
- Previous experience with online course selection OR online teaching experience.
- Experience with the Connecticut Curriculum Standards for the discipline in question.

*Process* (est. time = 60 days)

- Identify sources for the subject in questions (these may be commercial, local, or new)
- Review the materials to see which best meet the selection criteria (*see below*)

*Selection Criteria* (in descending order of importance)

- Meets Connecticut Curriculum Standards.
- Reading level and approach are appropriate to Connecticut Adult High School students.
- Flexibility (can instructors add, subtract, and re-purpose the materials?).
- Interactivity (the course will engage students in individual and group activities that foster learning).
- Technical features
    - Graphical appropriateness (multimedia elements, effective use of fonts, white space, images, video, etc.).
    - Web references (online resources, stable providers, unbroken links, etc.).
    - Adaptability to Connecticut's Learning Management System (can the course be delivered by or through Blackboard).
    - Content is re-organizable (sections can be moved, deleted, or expanded).
- Commercial content can be leased at rates and for time periods appropriate to Connecticut's purposes.
- Local courses can be provided at affordable rates and without copyright entanglements.

*Deliverables*

- The team will deliver a report on the curriculum they recommend, detailing its strengths, weaknesses, provider, and financial particulars. This report will serve as the basis for the purchase/lease of the course, so it should contain all the necessary contact information, version information, pricing, access codes, etc.

- The team will provide a syllabus for the course (this may be supplied by the content creator).

- The team will document the curriculum's alignment with the Connecticut Curriculum Standards.

# Technology Specifications for Online Learning

A Learning Management System (LMS) should provide:
- An integrated tool set for online learning including:
  - Communication tools (email, discussion board, chat)
  - Content controls (web files, syllabus, navigation options)
  - Assessment tools & Grade book.
  - Backend database for student progress & SIS integration
- SCORM and AICC compliance
- Licensing model that works for a statewide initiative.

Application Service Provider/ Support Center
- Data Center for LMS hosting with procedures for backup, automated server monitoring, professional technical support (see *Contingency Planning* for sample).
- 7x24x365 support for the LMS.
- 7-day support for student and teachers using the courseware with system for tracking issues and solutions.
- Online documentation for standard user issues (passwords, browser compatibility, LMS issues, frequently asked questions, etc.)

Student Computing
- Access to an LEA provided resources.
- LEA labs meeting the specifications for online courses.
  - Internet access
  - Software: compatible browser, MS Office
  - Hardware: printers, microphones, scanners, digital cameras.
  - Current Plug-in availability (e.g. Adobe Acrobat, Flash, Windows Media Player, Real Player, etc.).
- Specifications/documentation for student "home" computers.
- Portable media (floppies, zip disks) for transport of student work.

Instructor computing
- Technology certification (see Prerequisites in *Teacher Preparation for Online Courses*)
- At work (see Student Computing).
- At home (internet access for monitoring student communication).
- Certification in using the LMS (see *Teacher Preparation…*)

# Appendices

# The Online Instructor's Role

***What is it like to teach online?  Can I do it?  Will I like it?  Will my students learn?  Who will help me?***

These are just a few of the questions that leap to mind when teachers are asked to imagine teaching an online course.  This document is an attempt to de-mystify that activity.

First, online teaching requires the same skill set as on-ground teaching.  In other words, the abilities that make someone a good teacher—content expertise, strategies for facilitating student learning, communication skills, and nurturing—are also required for the online teacher.  We can't make an online teacher out of anyone who is not already a skilled teacher.

So what is different?  Well, online instruction involves the substitution of written feedback for most, although not all, of the teacher-student interaction.  And that is an area where teachers new to online instruction will benefit from some instruction and some direct exposure to an online class. These skills are learnable, and most online teachers report that they bond with their online students at least as strongly as they bond with their on ground charges.  So while the interaction is written more than verbal, the result can be the same—students learn and the bond with each other and with their instructor.

Second, online courses arrive fully designed for the instructor to use.  In other words, teaching online does not require building a web site any more than teaching on ground requires writing a textbook.  The typical online courses are built through a collaboration of content experts, instructional designers, graphic arts, and assessment specialists.  Online instructors take this work and add their special materials, insights, and personality.  The result is a "customized" course built on quality pre-existing materials.

And finally, the scariest question: what technical skills are necessary to teach online?  The answer is that a good online instructor will be comfortable with the standard Internet tools—email, web searches, word processing, and attaching files to email.  In addition, online instructors need to learn how to protect themselves and their students from viruses, how to deal with multiple file types (e.g. changing a Word document into at RTF file or into an HTML file), and how to post to a threaded discussion.  These final three areas may require a couple of hours of training, but they aren't difficult.

Most online courses are delivered within an application called a Learning Management System (this project uses Blackboard).  The online instructor needs to be familiar with how this application works, and that will also take a few hours of training and some practice.

But online instructors are NOT programmers, graphic artists, or Support Center support. These responsibilities belong to others.

### *Content Clarifier*

While content is already provided, you as instructor get to decide the best activities and pacing for your class. What has already been done for you is the "lecture"; it's the online teacher's job to help individual students understand concepts that they don't understand, just as you would help individuals during class work time.

You can answer students' questions via the course messaging system, phone, or threaded discussion. It's a good policy if you have release time to work on this class to establish at least one office hour per week in which you'll be available so students can communicate with you. It is also important to establish a messaging response time. A good response time is this: 8 hours for the first week (check your email several times each day), 24 hours thereafter. Be sure to give yourself some leeway on the weekends, as well. Make sure you tell your students what your boundaries are!

For phone calls, let students know when it is appropriate to call you (if at all). If you don't want to receive calls at home, don't give out your home number. Do, however, provide your office phone number with a good time to call. Some students have a really hard time communicating online. They need to know they can talk with a live human being. Again, set the boundaries: when can they reach you?

The Online Instructor role is really a switch from "sage on the stage" to "guide on the side"; this role has two meanings. The first is class-wide. You watch for trends in class errors or successes and encourage or re-teach as necessary. You might find it advisable to schedule a class tutoring session (you can archive this session for students who can't make it or you can use a discussion board). Or you might want to start an asynchronous online discussion to help students articulate their understanding of a concept that they seem to be missing. Perhaps you'll want to bring in an activity you've used in the classroom that has helped you teach a particularly difficult concept. For example, the Algebra teachers we worked with when we were deliberating on what content to use for the Algebra class all different metaphors for teaching the distributive method of multiplication had. Please bring your expertise into the online classroom! Don't feel restricted by the content—it's there to take a lot of the burden of instruction off your shoulders, not to stop you from teaching.

Another aspect of being an online instructor is making sure that students overcome obstacles of online learning. The Online Student Orientation Course should do a thorough job of preparing them, but there are bound to be some psychological and technological hurdles that will need to be overcome in order for certain students to have a successful learning experience. If a student is not turning in assignments or hasn't logged in for 2-3 days, it's a good idea to be proactive and contact their onsite mentor. Find out what's happened. In many instances, the student has become frustrated by some aspect of the

class and has, for one reason or another, simply failed to ask the right questions. If you ask probing questions, there's a good chance you'll be able to find the reason and help the student get back on track.

Just as in a face-to-face environment, your students thrive on the verbal and non-verbal cues of encouragement and support; online students need to feel that you support them and are on their side. Given the environment, these evidences need to be overt. They can range from positive comments on assignments, to email reports (this is how you're doing, good job on this, you can improve on that), emails or phone calls commending them for specific achievements (it's also nice to copy these praise messages to the onsite coordinator/mentor).

### Student Support System

Though you may be your students' first point of contact, you are not alone in helping the students in your online courses to succeed. Other resources include the onsite mentors for counseling, advising, encouragement, and helping to bridge communication gaps between you and the students. Ideally, you'll keep in contact with the onsite mentor—report progress, problems, and successes on a regular basis. If you lose track of a student, ask the onsite mentor to help you track him/her down and find out what is going on.

In addition, you do not need to know all the answers to your students (or your own!) technical questions. The CTDLC tech support can be accessed by both teachers and students (860-832-3887) or through our online Support Center: https://www.etutoring.org/support/index.cfm.

### Start Dates and Enrollments

One of the primary goals of this project is to create an option for students who do not come in at the beginning of the school year to get started without having to wait for the next face to face semester. To accommodate these students and to retain the benefits of group learning environments we have created scheduled enrollment system. These scheduled terms will start every September, November, January, March, and June and progress through the course at a given rate.

# Virtual High School Mentor Guidelines

**The Mentor Role-** What is the purpose of the Mentor role, and why has it developed into a critical factor for success in Virtual High School programs nation-wide?

Working from a knowledge base drawn from the experiences of accomplished online instructors, as well as the most current research coming out of the distance learning community, and the wisdom of the adult education community, the following guidelines for Mentors are offered.

The three areas of focus for these guidelines are:
1) **Procedures**
2) **Technology**
3) **Relationships**

## Procedures

### How often do Mentors communicate with students?
- Each student should have contact with his/her Mentor at least one time a week, either face to face or virtually.
- If a student is having difficulty, more frequent contact is recommended.

### This weekly meeting will facilitate two processes:

**1) Documenting student progress**
We recommend weekly documentation for several reasons:

- To identify those students who require extra attention, and to respond by creating a plan of action with these students (to be proactive rather than reactive).
- To keep students secured and anchored, providing a record that facilitates consistency should there be changes in personnel.
- To be accountable. We can use data provided in student documentation to report on how students did in the program overall, and to identify factors that influenced student success and failure.

**2) Help students articulate their plan of study**
- Some students require assistance organizing their schedules. Online courses require even more deliberate structuring of one's time. Therefore, it is recommended that the Mentor help the student create a weekly study plan, identifying for example, when to study, when to complete assignments, when to log into a discussion group, etc.

## Preparing for Technological Challenges

The following issues have been identified as potential technological challenges students might experience in an online classroom format. Responses to each challenge are listed in italics:

- ❖ **The server goes down and students cannot access the course**.
  - ▪ *Develop a relationship with the local library and encourage students to use the library's computers.*
  - ▪ *Identify alternate computer sites with students.*
  - ▪ *Remind the students they can work at a later time if necessary.*

- ❖ **Dealing with security issues/Facilitating internet access at each site**
  - ▪ *Advise students not to use AOL at all.*
  - ▪ *Help Students set up email through yahoo gmail or an equivalent service.*

- ❖ **Online distractions can make it difficult for students to stay on track. This is not something that can be easily controlled by the Mentor.**
  - ▪ *When reviewing a student's study plan, use this time as an opportunity to discuss how the student is using his/her scheduled study time, particularly if the individual's goals are not met.*
  - ▪ *Discuss the impact internet distractions could be having on these study sessions.*

- ❖ **How can I help a student make sure she/he has the required computer settings to access the course and all course materials?**
  - ▪ *Mentors need to help students to access technical support by using our online Support Center or the phone. Help students articulate their questions and have them create a ticket or call the Support Center.*
  - ▪ *Consider having a student who is reluctant to contact support help independently, actively practice calling the Support Cetner (phone # 860-832-3887).*
  - ▪ *CTDLC will provide each LEA with a list of the necessary computer and browser requirements to run Blackboard.*
  - ▪ *Identify your own local technological resources. Who is your LEA's computer expert? Having local access to technical support would helpful.*

## The Mentor Relationships: Students and Teachers

How is the student Mentor relationship different from the relationship between a student and Teacher? And what relationship does the Mentor have with the Teacher?

**The Online Teacher is responsible for:**
- ❖ Course Content

- ❖ Grading
- ❖ Evaluation/Assessment
- ❖ Sequence/Time Line
- ❖ Creating a Learning Community/Establishing a sense of Community/Creating a Space where Students feel safe and secure
- ❖ Communicating with Students (timely feedback…within 24 hours)
- ❖ Maintaining the course (i.e. updating links)

**The Mentor's role is:**

**A. To act as the Teacher's eyes and ears, providing:**
- ❖ Direct reporting to the Teacher, when necessary, that a student is frustrated, angry, or in distress.
- ❖ A resource to help the Teacher problem solve when addressing an individual student's needs.
- ❖ Another person to help the student develop the skills required to communicate, organize and succeed in the online classroom.

**B. To be the student's face-to-face resource for:**
- ❖ Emotional support
- ❖ Technical guidance
- ❖ Communication facilitation
- ❖ Program documentation

**Below are ideas and suggestions for developing effective practices:**

1. The Mentor provides the "personal" touch. Be available to the student as an emotional support person. Calm a student when angry and help him/her explore his/her feelings when upset.

2. Having clear expectations from the onset of all classes regarding the Teacher's expectations, perhaps in the form of rubrics, will help Mentors provide appropriate and effective guidance to students in completing their assignments.

3. Encourage students to communicate with their Teachers, helping them as they articulate their thoughts and questions. Help students to appropriately use the course Messaging system for communication.

4. Facilitate student and Teacher communication so they are in contact with each other as much as possible. Intervene on the student's behalf only when necessary.

5. Never make derogatory remarks about the online Teacher no matter what you think or feel.

6. Be very careful not to create a good Teacher/bad Teacher dynamic, where the student sees you as the able person and the Teacher as less than.

7. The Mentor should primarily be the "Process Person," facilitating the work of the student and Teacher, but not getting actively involved in teaching any of the courses.

8. The content of the course and how it is taught should be left to the Teacher to design and control.

**Finally, the roles of the Mentor and the Teacher need to be clearly delineated and conveyed to the students.**

Training is provided as needed by the CT Distance Learning Consortium.

# CTDLC Blackboard® Contingency Planning

## Blackboard Reliability Expectations
The CTDLC Strives for 99% uptime with all of its mission critical servers. The Blackboard Server itself utilizes multiple processors, hard-drives, network cards, and power supplies to provide automatic fail-over and redundancy in the event of component failure. The Blackboard Server resides in the BSAA Data Center. This facility provides power, HVAC Controls, battery backup, tape and disk backup. In addition, the Data Center is equipped with redundant HVAC systems and an 85Kw generator in the event of power failure.

The Blackboard Software and operating system are monitored 24x7x365 using industry standard performance monitoring tools. These tools alert both Blackboard and Network administrators to potential problems and failures of the Blackboard application should they occur. In addition, the Blackboard application and server is protected with Symantec Corporate Anti-Virus software.

The CTDLC staffs the Tier I Support Center seven days a week. Additionally, there is an emergency services team (two tiers) to provide on-call backup and support in the event of a mission critical problem with the Data Center services (including Blackboard). In addition to the CTDLC team, we contract directly with the Blackboard "services" department for emergency and on-call support.

## Technical Support Provided

The CTDLC provides two aspects of technical support, as detailed below.

### CTDLC Support Center
The CTDLC Support Center provides technical support for students and faculty. The support available through email and phone communications encompasses course login issues, browser issues, and problems specific to accessing sections of courses (quizzes, mail, discussions, etc.). It is recommended that students refer course content issues to the course instructor(s). Course content issues that are presented by instructors/designers are referred to the CTDLC Instructional Design Department, when applicable.

The CTDLC Support Center staff will escalate issues to Blackboard's Tech Support Team when deemed necessary (for example, issues concerning student account/Blackboard database synchronization). Student enrollment issues are handled by the Connecticut Community College Systems Office. Blackboard Tech Support is also contacted for specific Banner event issues, should they be encountered.

### Blackboard Application Administration
CTDLC provides Blackboard application administrators to service the needs of the server. This includes research, testing, and application of appropriate service patches and hot fixes available from Blackboard, as well as research, testing, and application of appropriate service patches of Microsoft Windows available from Microsoft. Updates, patches, and upgrades to server hardware (bios, network cards, and storage devices) are also performed by the application administrators, in addition to updates, patches, and quarantine management of Symantec Anti-Virus.

## Connectivity and Points of Failure

To date, the CTDLC has built a robust client/server network. As a distance learning delivery agent, we strive to harness the power of technology and recognize the critical role that technology can play in improving the quality of our student's lives. The CTDLC utilizes the internet and web services to facilitate our distance learning instruction.

The CTDLC information technology system is based on an "enterprise" infrastructure model, designed to maintain a robust, reliable, and secure platform for the communication and exchange of information between staff, administrators, and faculty. This system allows us to build on both modular and automated systems to provide redundancy, maximum up-time, and unparalleled performance.

The Connecticut Distance Learning Consortium maintains a data center at 55 Paul J. Manafort Drive in the Charter Oak State College facility. This data center offers industry standard data center services such as:

- UPS Backup System
- Backup Generator
- A/C System
- Security System
- Rack Enclosures
- High bandwidth

The datacenter is protected by Nokia Checkpoint firewall appliances and backed-up with Veritas Backup Exec / LTO 2 architecture. Backups are stored off-site at a remote storage vault and cycled weekly. VPN tunnels have been created with clients and client databases to facilitate the secure interchange of information.

The Manafort Drive Data Center is relatively new, opening in June 2003. All of the components in the data center including auxiliary systems are also new. We have attempted to leverage recent technological advances in our data center including Cisco gigabit over copper networking, APC infrastructure battery and rack enclosures, Checkpoint AI firewalls, etc. Security for the data center is provided by CCSU State Police.

As part of our research and development in learning management systems, we currently maintain three pre-production environments. These environments are used to simulate student draw, test patches and tweaks, and also to test Student Information System (SIS) to Learning Management System (LMS) functionality.

The data center sits on the Connecticut Education Network (CEN). This dark fiber network connects our data center at gigabit speed to many colleges and universities in Connecticut. In addition, the data center offers a public internet connection to facilitate student at-home connectivity. The CEN offers public internet connectivity through both Qwest Internet and AT&T. These two organizations represent Tier I (biggest) internet providers in the world. The CEN has a built-in failover for all of its connections. In the

event that one service provider becomes unavailable, all internet connectivity (including Blackboard data) will be ported to the backup internet connection automatically.

While the CEN provides a robust platform to deliver Blackboard content, student and faculty members must also maintain an internet connection to receive the data. Blackboard end user problems that are a result of local campus internet failures, DSL/cable modem failures, or dial-up problems can't be addressed by the CTDLC. Those problems should be directed to the end users ISP or the local Campus Network Administrators.

## Blackboard Contingency Planning

We see the Blackboard contingency planning as follows:

### Full Server, Application, and Database Recovery
A backup of the Blackboard server is performed nightly. This backup is rotated weekly to an onsite storage vault and then moved off-site to a separate storage facility. We currently keep one month of historical Blackboard data files in storage. Blackboard Campus Edition application uses a file dense architecture to store student, faculty, and course information. Due to the density of the storage, the current mean time to restore for a catastrophic data failure is approximately 12 hours.

The CTDLC currently has a partnership with another State Agency to utilize their current Data Center in the event of catastrophic failure. The current time to restore from a catastrophic "data center" failure (fire) is approximately 36 hours. This restore would involve acquiring hardware for Blackboard, migrating firewall rules and VPN (Banner) connections, and restoring data from the tape medium.

### Point in time corruption recovery
In the event of a point in time corruption (Banner Sync issues, Script malfunction, etc.) the CTDLC can use the nightly tape backup to restore to the "last known good" version of the system. The CTDLC would expect a data loss (student, faculty, and course content) from the time that the problem was identified back to the point in time when the backup tape completed. Mean time to recovery approximately 6 hours.

### Specific Course or transaction recovery
Although the CTDLC does perform regular backups of the Blackboard system, faculty are advised to backup their own courses using Blackboard's built-in course backup utility. While faculty have the option of saving the backup to the Blackboard server itself, the CTDLC recommends that for redundancy, the courses be downloaded to the faculty member's computer. This provides an alternative location in the event of a Blackboard server problem.