

CEU COURSE DESCRIPTION

BACTERIOLOGICAL DISEASES CEU TRAINING COURSE

This CEU course reviews commonly found water and wastewater diseases, symptoms, and identification techniques. This course covers water and wastewater sampling techniques, waterborne disease identification and control, general water quality operations and definitions, disease symptoms and diagnosis, and history, susceptibility, and sources of contamination. This course applies to all categories of water treatment/distribution and wastewater treatment/collection. As water/wastewater professionals, it is our responsibility to identify, stop, and control all waterborne diseases.

This course was designed for the enhancement of laboratory technical abilities and was intended for water laboratory analysts, but can also be utilized by wastewater treatment workers, collections, onsite installers, water distribution, well drillers, pump installers, and water treatment operators. This course is also an excellent introduction for a person interested in working in the water quality field or a water/wastewater treatment, distribution, or collections facility, who wishes to maintain CEUs for a certification license or to learn how to perform their job safely and effectively, and/or to meet educational needs for promotion. Every operator or customer service person who has contact with the public should have this booklet accessible to help answer water quality and waterborne disease related questions.

Less than 100 years ago, typhoid fever and amebiasis were the main causes of water-borne illnesses and deaths in the US. Thanks to contemporary water treatment measures, we have defeated old foes like typhoid fever, cholera, and dysentery. However, new threats have emerged in our waters. Microbial contamination of water is rare, but it can and does occur, resulting in illness and even death.

Probably the best-known and most deadly case of contamination in the US in recent years happened in Milwaukee in 1993, when

Cryptosporidium, an intestinal protozoan, contaminated the municipal water supply. At least 50 people died, and some 400,000 people became ill, 4,000 badly enough to be hospitalized.

There are no prerequisites, and no other materials are needed for this course.

Recognition of Illness Associated with the Intentional Release of a Biological Agent

On September 11, 2001, following the terrorist incidents in New York City and Washington, D.C., CDC recommended heightened surveillance for any unusual disease occurrence or increased numbers of illnesses that might be associated with terrorist attacks. Subsequently, cases of anthrax in Florida and New York City have demonstrated the risks associated with intentional release of biological agents.

This course provides guidance for water providers and public health personnel about recognizing illnesses or patterns of illness that might be associated with intentional release of biological agents.



Cryptosporidium
Image Courtesy of
Centers for Disease
Control and Prevention
(Parasite Library)

Course Goals

1. Explain various definitions, symbols, and characters used in the laboratory.
2. Define and utilize various water and wastewater sampling techniques.
3. Define and explain the chain of custody form and sample security.
4. Explain various microbiological preservation techniques.
5. Define microbiological MCLs and heterotrophic plate count.
6. Identify the history of the microbiological life sciences and disease research.
7. Define and explain various biological and complex microbiological processes.
8. Define, identify, and explain the difference between bacteria and viruses.
9. Define, identify, and explain protozoan life.
10. Identify and explain various waterborne disease germs or microbes.
11. Define and explain various waterborne disease symptoms and illnesses.
12. Define and explain various waterborne disease testing and identification methods.
13. Define and explain various waterborne disease removal or disinfection techniques.
14. Understanding and identifying waterborne disease identification and collection.
15. Waterborne disease laboratory procedures.
16. Advanced waterborne disease application and competency.

Learning Objectives and Timed Outcomes

1. General water quality information section – 665 minutes.
 - a. Understand microbiological history and disease research – 20 minutes.
 - b. Understand the difference between bacteria and viruses – 25 minutes.
 - c. Define differences between archaea, bacteria, and eukaryotes – 35 minutes.
 - d. Define various water quality processes, terms, and definitions – 325 minutes.
 - e. Explain and summarize SDWA with regards to waterborne diseases – 60 minutes.
 - f. Know Stage 1 and proposed Stage 2 Disinfection Byproduct Rule (DBPR); EPA data gathering and monitoring programs under the Unregulated Contaminant Monitoring Rule – 45 minutes.
 - g. Know various sampling procedures, proper handling, QA/QC measures, chain of custody procedures, positive coliform samples, HPC, and total coliforms – 155 minutes.
2. Laboratory and identification section: ability to describe, sample, test, and differentiate various pathogens, viruses, protozoan diseases, and related waterborne diseases, including epidemiological identification procedures and laboratory testing methods – 350 minutes.
 - a. Viral gastroenteritis or rotavirus, Norwalk-like viruses found in human feces; also, shellfish; lives in polluted waters (diarrhea and vomiting).
 - b. Escherichia coli (E. coli O157:H7 [bacterium]); other E. coli organisms found in human feces; symptoms vary with type-caused gastroenteritis; water sampling and laboratory procedures defined.
 - c. Typhoid salmonella typhi (bacterium) human feces, urine; inflamed intestine, enlarged spleen, high temperature—sometimes fatal.
 - d. Shigellosis shigella (bacterium) found in human feces; diarrhea.
 - e. Cholera vibrio cholerae (bacterium) found in human feces; (also, shellfish; vomiting, severe diarrhea, rapid lives in many coastal waters) dehydration, mineral loss—high mortality.
 - f. Hepatitis viruses commonly found in human feces; shellfish grown in polluted waters. Symptoms: yellowed skin, enlarged liver, vomiting, weight loss, fever, abdominal pain—low mortality, lasts up to four months.

- g. Amebiasis *entamoeba histolytica* found in human feces; mild diarrhea, dysentery, (protozoan) extra intestinal infection.
- h. Giardiasis *giardia lamblia* (protozoan) in animal or human feces; diarrhea, cramps, nausea, and general weakness—lasts one week to months. *Giardia* is defined as a protozoan parasite found in water and other media. The two species of *Giardia* and their potential hosts are *G. intestinalis* (humans) and *G. muris* (mice). Laboratory procedures defined.
- i. Cryptosporidiosis *cryptosporidium parvum* found in animal or human feces; diarrhea, stomach pain—lasts (protozoan) days to weeks.
- j. Legionella. The first discovery of bacteria from genus *Legionella* came in 1976 when an outbreak of pneumonia at an American Legion convention led to 29 deaths. The causative agent, what would come to be known as *Legionella pneumophila*, was isolated and given its own genus. The organisms classified in this genus are gram-negative bacteria that are considered intracellular parasites.
- k. Ten other related diseases, illnesses, and identification methods, and chemical-related diseases like methemoglobinemia, arsenic poisoning, and taste and odor factors geosmin, methyl-isoborneol (MIB), and cardin-4-ene-1-ol.

Specific Course Goals and Timed Outcomes (Beta Testing)

Summary

This course was originally taken from TLC's Waterborne Disease 40-hour course. It was split into two different courses with the intention of dividing the CEUs or contact hours for the benefit of operators that did not need the complete 40-hour course.

In February, 2004, seventeen students were originally selected and given a task assignment survey in which to track their times on the above learning objectives (course content) and utilized a multiple choice and essay-style answer sheet to complete their final assignment. All students were given 30 days to complete this assignment and survey, and eleven students successfully completed this assignment. The students were tested and the average time necessary to complete each task was recorded in the above objectives and timed outcome section. The students did not receive payment for their completed assignments. In the above timed outcome section area, the tasks were measured using times spent on each specific objective goal and final assignment grading of 70% and higher.

Beta Testing Group Statistics

All seventeen students held water treatment and/or wastewater treatment operator certification positions. None of the test group received credit for their assignment. Four students failed the final examination. Three students did not complete the reading assignment, with no explanation given. The average times were based upon the outcome of ten students.

Total time 20.8 hours *We are asking for 20 hours of credit.*

Course Training/Assessment Needs Methodology

Technical Learning College identified training/assessment needs by placing identifying them in two categories; internal and external.

1. The difficulty of your course.

Very Easy 0 1 2 3 4 5 Very Difficult

2. Please rate the difficulty of the testing process.

Very Easy 0 1 2 3 4 5 Very Difficult

3. Please rate the subject matter on the exam to your actual field or work.

Very Similar 0 1 2 3 4 5 Very Different

Task Analysis and Training Needs Assessment Process Information Gathering

Task Analysis and Training Needs Assessments have been conducted to determine or set Needs-To-Know for the basis of TLC's continuing education courses. The following is a listing of some of those who have conducted extensive valid studies from which TLC has based the continuing education program upon: the Environmental Protection Agency (EPA), the Arizona Department of Environmental Quality (ADEQ), the Texas Commission of Environmental Quality (TCEQ), Pennsylvania Dept of Environmental Protection (PDEP) and the Association of Boards of Certification (ABC).

TLC has primarily used Training Provider Manual for the Pennsylvania Water and Wastewater System Operator Training Program for course goal setting and learning objectives for all three training formats; conventional classroom, distance paper based and web based training.

The titles or names of subjects (Learning Objectives) may be changed for readability purposes. Some of the terms used in this document may be part of a copyrighted adult learning assessment process and in these cases, we utilize generic terminology.

ADDIE

TLC utilizes a five-phase instructional design model consisting of Analysis, Design, Development, Implementation, and Evaluation for our continuing education courses. Each course design step has an outcome that feeds into the next step in the sequence. The five phases of ADDIE are as follows:

ANALYSIS

During the Training Needs Assessment Process Information Gathering Analysis phase, the course designer(s)(see Subject Matter Experts and Contributing Editors) identifies the learning need, the goals and objectives, the student's needs, existing knowledge, Course Statement of Need, and any other relevant characteristics (State or Federal Need-to-Know) and to ensure that students are learning what is relevant for their job.

DESIGN

This is the systematic process of specifying learning objectives from the Training Needs with a focus on Bloom's Taxonomy. A detailed storyboard following the Needs Assessment/Survey and/or Course Statement of Need will determine the course content.

DEVELOPMENT

The actual creation (production) of the training content will begin based upon the Design phase using Bloom's Taxonomy. At this time, a decision is made to proceed or table the course.

IMPLEMENTATION

During implementation, the Alpha testing plan is put into action and a procedure for course and/or assessment revision is implemented. These course materials and assessments are delivered or distributed to the student group. After delivery, the effectiveness of the training materials is evaluated in Beta testing phase. All of our courses have extensive Alpha and Beta testing to ensure job relevancy, correct information and course learning objectives are met.

EVALUATION

This phase consists of (1) formative and (2) summative evaluation from Alpha and Beta testing. Formative evaluation is present in each stage of the ADDIE process. Summative evaluation consists of tests designed for criterion-related referenced items and providing opportunities for feedback from the students and proctor. Administrative and instructional staff will collect all student concerns (verbal, written and surveys) and distribute these to TLC Administrative personnel for evaluation and course corrections. Course and/or Assessment revisions are made as necessary.

Precept-Based (Micro-Learning) Training Course

TLC's training courses are based upon a form of induction training, made of topical and technical precepts that are discovered in the Needs Assessment/Survey and/or Training Needs Assessment Process Information Gathering. The training topics or learning objectives are made up of "micro-content" or "precepts" – or small chunks of information that can be easily digested. These bite-size pieces of technical information are considered to be one of the most effective ways of teaching students new or important information (regulatory or technical) because it helps the mind retain knowledge easier.

Micro-learning or precept-based training doesn't rely on the student to process a large amount of information before breaking it down. Our method includes short modules with clearly defined learning goals for each section. This method allows a student to hone in on a particular skill, then given the opportunity to exhibit their knowledge in the final assessment (assignment).

Course Training/Assessment Needs Methodology

Technical Learning College identified training/assessment needs by placing identifying them in two categories; internal and external.

Internal Methods include:

- ✓ Observation
- ✓ Interviews
- ✓ Instruments: Perception instruments and Knowledge based assessments
- ✓ Student records and reports
- ✓ Group problem analysis (Classroom or Seminars)
- ✓ Performance or Survey appraisals

External Methods include:

- ✓ Outside consultants (Completion)
- ✓ Government Certification Reviews (Training Needs)
- ✓ Records and reports from other agencies

The needs assessment/survey maintains our training and education materials criteria. Assessments and course material changes are performed based on changes in technology, evaluations of the participants and regulatory changes. Materials are assessed yearly or as needed to insure course integrity.

Ongoing Course Evaluation

Administrative and instructional staff will collect all student concerns (verbal, written and surveys) and distribute these to the Course Editor or Copy-editors for evaluation and course corrections. Administrative and instructional staff will collect all student concerns (verbal, written and surveys) and distribute these to TLC Administrative personnel for evaluation and course corrections. Course and/or Assessment revisions are made as necessary.

Editor's Discretion

The Course Editor may change the course assessment (assignment), course text, objective, artwork and topical order as necessary for security, corrective, printing, readability or typesetting purposes. The assessment may be rotated for security purposes and the course material may be updated to reflect any regulatory updates and/or corrections. The overall course objective or topic guide may be in a different order than the course manual for the reason of typesetting or copy-editing purposes. Course materials, charts and artwork amendments, adjustments, modifications may be performed to reflect regulatory/safety text/artwork updates, Bloom's taxonomy changes, error adjustments and comprehension. These changes generally do not refl

Extensive Academic Research

Technical Learning College's (TLC's) continuing education course material development was based upon several factors; field experience working in the water quality field, extensive academic research (teaching in the community college system), advice from subject matter experts (State officials and industry leaders), data analysis, task analysis and training needs assessment process information gathered from other states.

Both Melissa and Jeff Durbin are the two primary Instructors, Subject Mater Experts and Technical Writers have trained and/or certified more than ten thousand students. These two Instructors teach on a daily basis in a classroom setting throughout Arizona and on-line to students nationwide. See below for more information.

ect major course material changes, but are minor in nature

Primary Course Designers Melissa and Jeff Durbin

Melissa Durbin

This course was co-designed by Melissa Durbin; she has over 25 years of teaching water and wastewater treatment experience as a college instructor. Melissa has written the several nationally accepted water and wastewater treatment manuals. Melissa has taught approximately 10,000 students about water and wastewater treatment and related classes. She will be available to answer questions relating this course.

Jeff Durbin

This course was co-designed by Jeff Durbin, over 10 years of water and wastewater treatment experience as a backflow inspector for the City of Phoenix and 20 years of water and wastewater treatment experience. Jeff has taught approximately 10,000 students about water and wastewater treatment primarily in water distribution, and pollution control (water quality) related classes. He will be available to answer questions relating this course.

Advice from Subject Matter Experts

Both Melissa and Jeff Durbin are professional trainers and have been educated in current trends in professional education and continuing education needs.

Course Compiler

Peter Easterberg, Detail-oriented technical writer/technical editor/desktop publisher/copy editor. 20 years' experience editing and writing feasibility and trade-off studies, test procedures, specifications, user manuals, company policies, HR forms, and ISO-9000 documents. Exceptional grammatical/written communication skills. "Go-to" person for Microsoft Word, Outlook, and general computer questions. Internet Webmaster Certificate (including HTML)

Contributing Editors

James L. Six Received a Bachelor of Science Degree in Civil Engineering from the University of Akron in June of 1976, Registered Professional Engineer in the State of Ohio, Number 45031 (Retired), Class IV Water Supply Operator issued by Ohio EPA, Number WS4-1012914-08, Class II Wastewater Collection System Operator issued by Ohio EPA, Number WC2-1012914-94

Joseph Camerata has a BS in Management with honors (magna cum laude). He retired as a Chemist in 2006 having worked in the field of chemical, environmental, and industrial hygiene sampling and analysis for 40 years. He has been a professional presenter at an EPA analytical conference at the Biosphere in Arizona and a presenter at an AWWA conference in Mesa, Arizona. He also taught safety classes at the Honeywell and City of Phoenix, and is a motivational/inspirational speaker nationally and internationally.

James Bevan, Water Quality Inspector S.M.E. Twenty years of experience in the environmental field dealing with all aspects of water regulations on the federal, state, and local levels. Experience in the water/wastewater industry includes operation of a wastewater facility, industrial pretreatment program compliance sampling, cross-connection control program management, storm water management, industrial and commercial facility inspections, writing inspection reports for industry, and technical reports per EPA permit requirements. Teacher and Proctor in Charge for Backflow Certification Testing at the ASETT Center in Tucson for the past 15 years and possess an Arizona Community College, Special Teaching Certificate in Environmental Studies. Extensive knowledge and experience in college course and assignment/assessment writing.

Dr. Pete Greer S.M.E., Retired biology instructor, chemistry and biological review.

Jack White, Environmental, Health, Safety expert, City of Phoenix. Art Credits



Melissa Durbin, Course Author and College Dean

30 years' experience in water quality and wastewater treatment along with 18 years of college instruction. Call me or any of the other Instructors for course assistance. I welcome your input and comments and hope you enjoy this course.

Course Registration and Support

TLC offers complete registration and support services for all correspondence courses via e-mail, Web site, telephone, fax, and mail. TLC will attempt to provide immediate, prompt service.

When a student registers for a distance or correspondence course, he/she is assigned a “start date” and an “end date.” It is the student’s responsibility to note dates for assignments and keep up with the course work. If a student falls behind, he/she must contact TLC and request an end date extension in order to complete the course. It is the prerogative of TLC to decide whether or not to grant the request.

Students have 90 days from receipt of this manual to complete the assignments in order to receive their continuing education units (CEUs) or professional development hours (PDHs). A score of 70% or better is necessary to pass this course. If students need any assistance, they should e-mail or call TLC with their concerns.

In the interest of privacy, students’ social security numbers are not used for tracking. Instead, a unique, alternate number is assigned to each student.

Grading Criteria

TLC offers students the option of either pass/fail or assignment of a standard letter grade. If a standard letter grade is not requested, a pass/fail notice will be issued. Final course grades are based on the total number of possible points. The grading scale is administered equally to all students in the course. Do not expect to receive a grade higher than that merited by your total points. No point adjustments will be made for class participation or other subjective factors. For security purposes, please fax or e-mail a copy of your driver’s license and always call us to confirm we’ve received your assignment and to confirm your identity.

Final Examination for Credit

Opportunity to pass the final comprehensive examination is limited to three attempts per course enrollment.

Course Assignment Material

Most of the EPA questions will come from the EPA summary, waterborne disease section identification, MCL listing, water sampling, and laboratory procedures. Other detailed information will come from the Centers for Disease Control. The EPA rules and laboratory procedures are also available on line at the EPA Web site (www.epa.gov). All rules and laboratory procedures are expected to be read and understood.

Students may have the option of completion of the laboratory assignment, either the heterotrophic plate count, Method 1623 – *Cryptosporidium* and *Giardia* or most EPA’s data gathering and monitoring programs under the Unregulated Contaminant Monitoring Rule. To receive alternate credit for the course, contact TLC to receive permission from your Instructor.

Instructions for Written Assignments

The Bacteriological Diseases training correspondence course uses multiple choice and true/false questions. Answers may be written in this manual or typed out on a separate answer sheet. TLC prefers that students type out and e-mail their answer sheets to info@tlch2o.com, but they may be faxed to (928) 468-0675.

Required Texts

The Bacteriological Diseases course comes complete with a short summary of the EPA Rules and Regulations and related drinking water standards. If more information is needed, including a complete set of Rules, they can be downloaded from the EPA Web page (www.epa.gov) and/or the appropriate state environmental agency. A laboratory or state agency may need to be contacted for certain sampling information.

Security and Integrity

We expect every student to produce his/her original, independent work. Lesson sheets and final exams are not returned to the students, to discourage sharing of answers. If any fraud or deceit is discovered, the student will forfeit all fees, and the appropriate agency will be notified. A random test generator will be implemented to protect the integrity of the assignment. Any student whose work indicates a violation of the Academic Misconduct Policy (cheating and/or plagiarism) can expect penalties as specified in the Student Handbook, which is available through Student Services; contact them at (928) 468-0665.

Student's Identity, Attendance, and Participation Verification

A proctoring report and/or computer-tracking program validates proper identity, attendance and participation. The student shall submit a driver's license for signature verification and track their time worked on the assignment. The student shall also sign an affidavit verifying they have not cheated and worked alone on the assignment. We follow up with telephone confirmation and/or quiz review assessment. All student attendance is tracked on TLC's student attendance database.

Teaching Techniques and Assessment Tools

Our training courses are based upon a form of induction training, made of topical and technical precepts. The training topics are made up of "micro-content" or "precepts"— or small chunks of information that can be easily digested. These bite-size pieces of technical information are considered to be one of the most effective ways of teaching people new information because it helps the mind retain knowledge easier. Micro-learning or precept-based training doesn't rely on the student to process a large amount of information before breaking it down. Our method includes short modules with clearly defined learning goals for each section with a post quiz and a final assessment (quiz). This method of pre-quiz allows a student to hone in on a particular skill, then given the opportunity to exhibit their knowledge in the final assessment.

Educational Learning Objective Topics

The CEU course covers several educational topics/functions/purposes/objectives. The topics listed are to assist in determining which educational objective or goal is covered for a specific topic area. This information is available in the detailed beta-testing information and may be found in the course's table of contents. The titles or names of subjects may be changed for readability purposes.

Environmental Terms, Abbreviations, and Acronyms

TLC provides a glossary in the rear of this manual that defines, in non-technical language, commonly used environmental terms appearing in publications and materials, as well as abbreviations and acronyms used throughout the EPA and other governmental agencies.

ADA Compliance

TLC will make reasonable accommodations for persons with documented disabilities. Students should notify TLC and their instructors of any special needs. Course content may vary from this outline to meet the needs of these particular students.

Feedback Mechanism (Examination Procedures)

Each student will receive a feedback or survey form as part of his or her study packet. The student will be able to find this form in the front of the assignment or lesson(assessment). The student can e-mail, snail mail or telephone TLC for any concern at any time.

Student Concerns

Most of student/training course related concerns are generally answered within 2 hours but not more than 24 hours. TLC has three support staff administrators with computers and telephones and have excellent communication and computer skills and able to respond and track all students and obtain or submit required forms and assignments. TLC has a dedicated computer student tracking system database that is backed-up on a daily bases and this information is secured and stored at a secure offsite location in case of fire or security problems. All student website information is tracked and documented for security measures.

Recordkeeping and Reporting Practices

TLC keeps all student records for a minimum of five years. It is the student's responsibility to give the completion certificate and/or paperwork to the appropriate government agencies. If necessary, we will electronically submit the required information to any required state agency for your certification renewals.

TLC Record Storage

TLC's training records include the following elements:

1. Individual course training (assessment) and registration page (Customer Order Record) is recorded in Excel format and the hard copies are scanned and stored in a computer database for 5 years and include the following:
 - a. the instructor(s) who taught each session on that date the of the training session or grading was offered (in comments section registration page) as well as which instructor was considered to be the lead instructor(s) and by the Director.
 - b. the name of the instructor(s) and facilitator(s) who proctored and/or graded the examination for each training session if applicable (in comments section registration page);
 - c. the attendance sign-in sheet(s) (registration page) for each training course or session;
 - d. all graded and dated validated examination answer (Assessment) sheets for each examination attempt including an explanation (written in comments and/or Excel list) for any retests as well as a narrative explaining any assistance provided to the attendee before the re-test; and
 - e. session evaluation(survey)forms (in comments section registration page and or Excel list).

Final Assignment

The final examination assignment is determined by the examination administrator or the instruction and there are generally three versions that are readily available. There is also three levels of the examination from average, (5 Answers) Difficult (5 +All of the above) and very difficult (Six answers and All of the above). The student is provided the average rated examination unless there is a condition or concern that requires a more difficult examination. Example, two or more students at the same address or any suspicion of cheating or potential fraud. We try to ensure the security and learning experience. Assignments/answer keys are only accessible to instructors and administrative staff that have a need to know clearance.

Failure

If the student fails the examination, they are provided with two more chances to successfully pass the exam with a score of 70% or better. The student may receive a different and randomly generated exam. Upon failure of an exam, the student can submit their concerns in writing or submit a survey form and has the option to receive instructor assistance that would be equivalent to conventional classroom assistance in discovering the areas that are deficient. The instructor has the option in describing the assistance method or procedure depending upon the student's deficiencies.

Forfeiture of Certificate (Cheating)

If a student is found to have cheated on an examination, the penalty may include--but is not limited to--expulsion; foreclosure from future classes for a specified period; forfeiture of certificate for course/courses enrolled in at TLC; or all of the above in accordance with TLC's Student Manual. A letter notifying the student's sponsoring organization (State Agency) of the individual's misconduct will be sent by the appropriate official at TLC. No refund will be given for paid courses. An investigation of all other students that have taken the same assignment within 60-day period of the discovery will be re-examined for fraud or cheating. TLC reserves the right to revoke any published certificates and/or grades if cheating has been discovered for any reason and at any time. Students shall sign affidavit agreeing with all security measures. The student shall submit a driver's license for signature verification and track their time worked on the assignment. The student shall sign an affidavit verifying they have not cheated and worked alone on the assignment.

Proctoring Instructions

Students enrolled in Technical Learning College's CEU courses that require proctored testing and **who do not live in the physical service area** of the Technical Learning College Test Center must nominate and gain prior approval of a proctor who will monitor course tests. A new proctor nomination form is required for each term and for each class.

PROCTORS, If Necessary...

A proctor is an individual who agrees to receive and administer a student's test(s) from Technical Learning College at the proctor's business email address. The test(s) will be ethically and professionally administered in a suitable testing environment (e.g., college/library or professional office). The proctor will return the test(s) to the Technical Learning College Test Center via fax immediately after administration, and the proctor will mail the exam within one (1) work day of administration to the Technical Learning College Test Center.

Proctors certify in writing to the Technical Learning College Test Center that the student completed the test according to all of the specific directions provided in the proctor guidelines letter. As the Proctor Nomination Form indicates, the student will identify the specific test(s) the proctor will monitor.

Any proctor the student nominates must be acting in the official capacity in one of the following positions:

- **College or University Personnel:** Dean, Department Chair, Student Records, Professional Staff Member of an adult/continuing education office or counseling center, Librarian, Professor, or any official testing center personnel if the tests are administered in the center.
- **Armed Forces Education Office Personnel**
- **Public or Private School Personnel:** Superintendent, Principal, Guidance Counselor, or Librarian.

- **Other:** Civil Service Examiner, Librarian for City/County, HR Professional, or Education/Training Coordinator.

The following persons do not qualify as proctors:

- **Co-workers, someone who reports to you or your immediate supervisor**
- **Friends**
- **Neighbors**
- **Relatives**

Nominating a Proctor

Students are responsible for identifying, nominating, and making all of the arrangements for the proctoring of their course tests, including the payment of any fees for services and the return of test materials to Technical Learning College Test Center (cost of FAX or postage). The proctor must be able to receive the student's test(s) via email as attachments. The Technical Learning College Test Center does not accept Yahoo, AOL, G-mail, Hotmail, or etc. email addresses.

If the student is unable to find a suitable proctor, they must contact the Technical Learning College Test Center for assistance immediately via email.

Proctor Nomination Form

Students will use the Proctor Nomination Form for nomination and approval of a proctor. The student will complete the top part of the form for each course s/he is taking, even if the same proctor is used for all tests. The student must click on the submit button for the data to be electronically transmitted to the Technical Learning College Test Center.

Disclaimer Notice

It is ultimately the student's responsibility to ensure that this CEU course is either approved or accepted in my State for CEU credit. The student shall understand State laws and rules change on a frequent basis and believe this course is currently accepted in their State for CEU or contact hour credit, if it is not, the student shall not hold Technical Learning College responsible. The student shall also understand that this type of study program deals with dangerous conditions and that the student shall not hold Technical Learning College, Technical Learning Consultants, Inc. (TLC) liable for any errors or omissions or advice contained in this CEU education training course or for any violation or injury caused by this CEU education training course material. The student shall call or contact TLC if help or assistance is needed and double-check to ensure the registration page and assignment has been received and graded.

Affidavit of Exam Completion

The student shall affirm that they alone completed the entire text of the course. The student shall affirm that they completed the exam without assistance from any outside source. The student shall understand that it is their sole responsibility to file or maintain their certificate of completion as required by the state.

Note to Students

Keep a copy of everything that you submit! If your work is lost, you can submit your copy for grading. If you do not receive your certificate of completion or other results within two to three weeks after submitting it, please contact your instructor.

Mission Statement

Our only product is educational service. Our goal is to provide you with the best education service possible. TLC will attempt to make your learning experience an enjoyable opportunity.

Educational Mission

The educational mission of TLC is:

- To provide TLC students with comprehensive and ongoing training in the theory and skills needed for the pesticide application field,
- To provide TLC students with opportunities to understand and apply the theory and skills needed for pesticide application certification,
- To provide opportunities for TLC students to learn and practice pesticide application skills with members of the community for the purpose of sharing diverse perspectives and experience,
- To provide a forum in which students can exchange experiences and ideas related to pesticide application education,
- To provide a forum for the collection and dissemination of current information related to pesticide application education, and
- To maintain an environment that nurtures academic and personal growth.

The student is required to submit the following information for assignment grading...

1. 70 PERCENT ON FINAL ASSESSMENT
2. DRIVER'S LICENSE
3. SCHEDULE OF TIME WORKED ON ASSIGNMENT
4. AFFIDAVIT OF EXAM COMPLETION
5. PROCTOR CERTIFICATION
6. TELEPHONE CONFIRMATION

Affidavit

State Requirements- Each State has 1 or more of these requirements.

Photo Identification

We will require a photocopy of your driver's license or official government ID to verify your identity. You can upload a copy of your driver's license or other official ID to this computer program or submit a photo copy with your assignment. You can take a photo of your ID with your cell phone and upload the photo. No certificate of completion or reporting to the State will be issued until we receive your identification.

Proctoring Report

If your State requires a proctoring report, we have a copy on this site for you to download and provide to your proctor. If you are unsure if you need a proctoring report, contact your State Agency or email us. Info@tlch2o.com You can also upload the report to us in this computer program.

Security and Disclaimer Affidavit

You must agree to the terms below before moving forward.

I understand that I am 100 percent responsible to ensure that this course is approved and/or accepted for credit by my State Agency. I understand that TLC has a zero tolerance towards not following their rules, cheating or hostility towards staff or instructors. I need to complete the entire assignment for credit. There is no credit for partial assignment completion. I will provide an official government ID card to verify my identity.

Some States require your computer camera to be on during the training program to ensure that you alone are competing the work.

If necessary by my State agency, my exam was proctored. I will contact TLC if I do not hear back from them within 2 days of final exam submission. I will forfeit my purchase costs and will not receive credit or a refund if I do not abide with TLC's rules. I will not hold them liable for any misinformation or any injury. I will allow TLC to email and/or call me.

You can take breaks between the text reading assignments and quizzes.

You can take notes.

You will need to pass the quizzes with 100% and the final exam with 70%.

There is a customer survey at the end of the program.

CERTIFICATION OF COURSE PROCTOR

Technical Learning College requires that our students who takes a correspondence or home study program course must pass a proctored course reading, quiz and final examination. The proctor must complete and provide to the school a certification form approved by the commission for each examination administered by the proctor.

Instructions. When a student completes the course work, fill out the blanks in this section and provide the form to the proctor with the examination.

Name of Course: _____

Name of Licensee: _____

Instructions to Proctor. After an examination is administered, complete and return this certification and examination to the school in a sealed exam packet or in pdf format.

I certify that:

1. I am a disinterested third party in the administration of this examination. I am not related by blood, marriage or any other relationship to the licensee which would influence me from properly administering the examination.
2. The licensee showed me positive photo identification prior to completing the examination.
3. The enclosed examination was administered under my supervision on _____.
The licensee received no assistance and had no access to books, notes or reference material.
4. I have not permitted the examination to be compromised, copied, or recorded in any way or by any method.
5. Provide an estimate of the amount of time the student took to complete the assignment.

Time to complete the entire course and final exam. _____

Notation of any problem or concerns:

Name and Telephone of Proctor (please print):

Signature of Proctor

CUSTOMER SERVICE RESPONSE CARD

NAME: _____

E-MAIL _____ PHONE _____

PLEASE COMPLETE THIS FORM BY CIRCLING THE NUMBER OF THE APPROPRIATE ANSWER IN THE AREA BELOW.

1. Please rate the difficulty of your course.

Very Easy 0 1 2 3 4 5 Very Difficult

2. Please rate the difficulty of the testing process.

Very Easy 0 1 2 3 4 5 Very Difficult

3. Please rate the subject matter on the exam to your actual field or work.

Very Similar 0 1 2 3 4 5 Very Different

4. How did you hear about this Course? _____

5. What would you do to improve the Course?

How about the price of the course?

Poor ____ Fair ____ Average ____ Good ____ Great ____

How was your customer service?

Poor ____ Fair ____ Average ____ Good ____ Great ____

Any other concerns or comments.
