DISTANCE EDUCATION CALENDAR

ANNUAIRE DE FORMATION À DISTANCE

Canadian Society for Medical Laboratory Science
Société canadienne de science de laboratoire médical

Course Calendar current as of July 22, 2008

Canadian Society for Medical Laboratory Science

A better place to learn . . . . .

Professionals in health care must evolve as fast as they can just to stay in the game. As a learning professional, you have made a decision to stay on the leading edge of your profession. You place a high value on continuing education as an effective means to react to rapid and ongoing changes in medical laboratory technology. CSMLS offers access to new information and excellent learning opportunities for you to upgrade your technical skills as well as develop an area of expertise.

Quality Courses for Professional Development

With over 100 courses and MODE Modules, CSMLS delivers the information you need to overcome obstacles blocking career goals and objectives. Transparencies, videos, computer assisted learning, and soon, the Internet, represent the technology used to deliver distance learning to you when and where you want it.

Quality Facilitators Guide the Way

CSMLS, a better place to learn, with instructors who actively support your distance learning and are only a "phone call or e-mail away" – You are never alone. These laboratory professionals give you the benefit of their growing experience and support you as you further develop you expertise.

Quality Service

We are with you every step of the way – providing a vital link between you, your facilitator and your course material. Lucy Agro, your learning coordinator, gives personal attention to all your issues and needs – registration, administration and communication.

CSMLS . . . . . a better place to learn.

Note: This information is current as of the date printed, however the information is subject to frequent change. For the most up-to-date course information, and for on-line registration, visit our website at www.csmls.org

July 22, 2008

TABLE OF CONTENTS / TABLE DES MATIÈRES

Courses are listed only once in the section where they fit best

ABOUT THIS DISTANCE EDUCATION CALENDAR

This calendar is designed to provide laboratory professionals with information regarding *accessible learning opportunities* through the CSMLS. Although courses are generally grouped by discipline, you will find that many programs are applicable across the different disciplines which reflect the current trend in healthcare to a broader, more "generalized" approach to continued learning.

All course information includes the CSMLS file number and the assigned credits where courses have been submitted for assessment. Courses with **more than 60 per cent content beyond the scope of knowledge and skill competencies expected of an entry level medical laboratory technologist** and a formal evaluation of learning are expressed in numbers of CPS/ART credits. (CPS/ART credits are based on the semester-hour credit used by many universities and colleges where one credit equals 15 hours of advanced instruction.) These courses may be used for:

- Certificate of Continuing Professional Studies (CPS)
- CSMLS Professional Enhancement Program (PEP)
- Route to ART certification

Those courses with **less than 60 per cent content beyond the scope of knowledge and skill competencies expected of an entry level medical laboratory technologist** are expressed in number of PEP hours and may be used for:

- CSMLS Professional Enhancement Program (PEP)

This distance education course and program guide has been designed with you in mind. We would appreciate your comments and suggestions for future revisions of this resource.

Courses are listed in the language in which they are offered. All courses start the first of the month.

For more information about CSMLS courses contact:

Lucy Agro
Coordinator, Continuing Education
PO Box 2830 LCD 1
Hamilton ON L8N 3N8

Telephone : (905) 528-8642

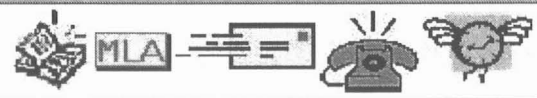
1-800-263-8277, Ext. 13

Or see our **website:**

Section F

Interdisciplinary

Interdisciplinary - *An Introduction to Ethics and Professionalism for Medical Technologists [4658]*	
Level: Advanced	**Credits:** 2.0 CPS/ART 37 PEP hours



This course is designed especially for Medical Laboratory Professionals, and will:
• Address the latest thought and research in the study of ethics as it applies to the laboratory
• Highlight the national and international standards required for the ethical and professional practice of biomedical technology.

This an important course for all lab professionals; we at CSMLS are pleased to introduce this unique offering. Whether you are new to the lab, currently supervising staff, or looking to move ahead in the profession, ethics is a hot topic. Course highlights include:

ETHICS – this section is designed to give you a brief overview of theories related to ethics in health care. We explore the latest research from CSMLS references, colleges, and papers on ethics.

PROFESSIONALISM – this section will focus on professionalism, which is an integral part of any successful career. Society has expectations of how we present ourselves; to be a professional, we must act in an ethical manner. Professionalism embraces rules of conduct, standards of practice, and support for professional associations. Required competencies necessary to be professional in the field of health care, and the lab in particular, will be identified. Doctors, nurses and lab professionals now function as parts of interdisciplinary teams; as such, we all contribute to facilitate patient care.

At the completion of this course, the learner will be able to:

- Examine and apply the CSMLS Standards of Practice and Code of Ethics
- Evaluate and apply ISO 15189 Ethics and Quality Policies
- Demonstrate the ability to transfer learning to the workplace setting
- Develop and apply critical thinking skills
- Know the role of a professional
- Develop and exhibit a keen sense of responsibility, integrity and professional ethics
- Apply theories to solve ethical and professional dilemmas in the practice of medical technology
- Solve problems in the laboratory, including troubleshooting

Who will be your instructor?

Sharon Leal was a member of the MUHC Adult Medical Ethics Committee, as well as, the MUHC Laboratory Quality Assurance Committee. Sharon is Technical Coordinator of Special Coagulation at the Royal Victoria Hospital in Montreal. She is responsible for all aspects of the daily running of the coagulation laboratory. Sharon is also a member of the Education Committee and the Hematology Quality Committee.

Course Prerequisites

- There is no prerequisite learning for this course; however, because Turnitin.com is used for submitting assignments and emailing with your instructor, **access to a computer and the internet is required.**

Why do YOU want to use Turnitin.com?

- You will have access to your marked assignments and the feedback from your instructor in a much faster time – you won't have to depend on the postal system
- You will have no trouble reading your feedback, and your instructor will have no trouble reading your assignments
- You won't have to find stamps and envelopes to mail your assignments or make a trip to the mail box or post office!
- Turnitin.com also allows you to email back and forth with your instructor, without displaying your personal email address. You can keep that private

Other course details:

- Continous registration
- One practice assignment
- Your learning will be evaluated by three comprehension assignments and an invigilated examination
- Assistance from Sharon via email and telephone (by appointment only)
- Individuals registered in a self-paced course must complete the course within 12 months of registration. After 12 months the registration will expire. No refund will be provided for expired registrations.
- Course last reviewed/revised: March 2007

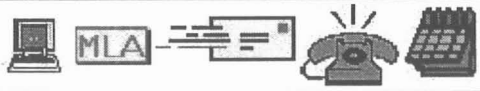
Course Fees

Members	$260
Non-Members	$390

This module is available on an ongoing basis.

Interdisciplinary - *COMING SOON! Training in the Lab: Applying the Science of Adult Learning and Instructional Systems Design (ISD) [4880]*

Level: Advanced **Credits:** TBA



ISD identifies the purpose and outcomes of the instructional event, along with guiding the content (degree of scope and linkage) and establishes measurement tools to evaluate the instruction. ISD's intent is to provide the best environment and conditions for all of the learners to acquire the knowledge, skills and attitudes to competently and confidently do their jobs. ISD is also referred to as a Systems Approach to Training (SAT).

ISD provides an analytical process for assessing training needs, designing instructional events and evaluation tools, and measuring the impact of the training on the organization. It is an orderly process for analyzing group and individual performance, and has the ability to respond to evolving training needs. The application of a systems approach to training (SAT) ensures that training programs are continually developed in an effective and efficient manner to keep pace with a continual, rapidly changing environment.

ISD provides a process to design and deliver an effective, efficient, flexible and measurable training system. Since the impact of this learning must be measurable, performance objectives are important in ISD. Effective ISD ensures that education and training sessions have value, includes all of the pertinent individuals, accomodates all learning styles, increases the competency of employees/learners, and meets the business/organization's goals.

At the completion of this course, the learner will be able to:

- Assess their own learning style and design approaches.
- Describe how adults learn.
- Use an instructional analysis process and job aids (templates, checklists, example products) to support them in the charting of course content.
- Use job aids to support them in the construction of performance objectives or learner outcomes that are observable and measurable.
- Use job aids to support them in the capturing of task or job-related teaching scenarios and teaching points.
- Use job aids to support them in the creation of scenario-based tests, and the use of best practices in developing test items
- Use job aids in the creation of test item pools and balanced tests that reflect learning taxonomy guidelines by Bloom and the CSMLS Certification test model.
- Use their chart and e-learning or correspondence course guidelines to make decisions regarding the sequence and size of course modules.
- Use reviews of educational models and CSMLS preferences to incorporate educational best practices into their approach to CSMLS course design.
- Use information on constructivist models of learning to thoughtfully improve their selection of instructional tactics.
- Learn the Tell, Show, Do and Reflection components of courseware to balance learning styles.
- Use distance education research and best practices to select the distance education strategies (including E-Learning Society features) they will deploy at the general, module and lesson levels of their course.

Who will be your instructor?

Denise Evanovitch, MLT

Course Prerequisites

- For a successful learning experience, you MUST check the computer you will use!
- System Processor: Minimum: 800 Mhz
- System Ram: Minimum: 500 MB
- Screen Resolution: 1024 x 768
- Internet Connection: Minimum 56K, high-speed recommended
- Firewall: Access by http://els.csmls.org/ permitted
- Pop-ups: • allow pop ups from http://els.csmls.org/ Or • when you are going to work in E-Learning Society, turn off the pop-up blocker
- JavaScript is required and can be installed from http://www.java.com/en/download/
- Browser: A recent version of your internet browser, Internet Explorer preferred
- NOTE: THE CSMLS PROVIDES TECHNICAL SUPPORT FOR E-LEARNING SOCIETY ONLY. WE CANNOT PROVIDE TECHNICAL SUPPORT FOR PROBLEMS WITH YOUR COMPUTER
- We highly recommend that you familiarize yourself with E-Learning Society well before your course start date. There are free courses in "start e-learning" to help you get comfortable with the system.

Course Fees

Members	$TBA
Non-Members	$TBA

Interdisciplinary - *Introduction to Point-of-Care Testing [4521]*

Level: Advanced

Credits: 0.7 CPS/ART

10 PEP hours

Point-of-Care Testing (POCT) is testing at or near the site of patient care. POCT has become part of common usage in the public domain because of its immediate ability to convey results on demand. Point-of-Care Testing must be both medically effective and economical. An important fundamental goal of point of care testing is to improve medical and economic outcomes. Another goal is rapid response. The objective of this course is to introduce a consistent set of principles for the professional practice of POCT.

At the completion of this course, the learner will be able to:

- Design and implement a quality point of care program with the ability to meet accreditation requirements and continuously improve. Become familiar with regulatory requirements and ways to meet them. Be introduced to Data Managers and processes involved in instrument selection to ensure a quality program.
- Review existing policies, procedures and practices related to POCT
- Understand the regulatory requirements related to POCT
- Compare different instrumentation through a needs assessment analysis
- Assist in developing criteria in clinical business care analysis for existing and future POCT initiatives
- Develop indicators to help monitor POCT activities, including accuracy/reproducibility of test results, utilization and improved patient outcomes
- Describe the key benefits of an electronic versus paper syste

Who will be your instructor?

Mark Hudgins, MLT, has been certified with the CSMLS since 1984 and has been Point of Care Testing Coordinator with Quinte Healthcare Corporation - Belleville General since 2000. Mark supervises all aspects of Point-of-Care Testing, from instrumentation selection through deployment. He has developed and implemented connectivity and interface methodologies for point of care instrumentation, to allow for electronic record keeping.

Other course details:

- Eight weeks in length
- CLSI standards available for loan, free of charge, to CSMLS members
- Continuous registration
- Four quizzes to be completed
- Assistance from Mark is available via telephone and e-mail
- Individuals registered in a self-paced course must complete the course within 12 months of registration. After 12 months the registration will expire. No refund will be provided for expired registrations.
- Course last reviewed/revised: June 2007

Course Fees

Members	$200
Non-Members	$300

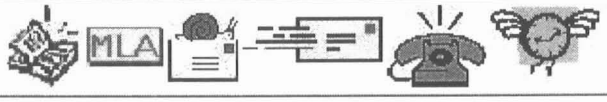
This module is available on an ongoing basis.

Interdisciplinary - *UPDATED - APRIL 2008! Why Physicians Order Laboratory Tests: A Laboratory Perspective [9879]*

Level: Advanced

Credits: 1.3 CPS/ART

19 PEP hours



The ever increasing workload facing busy laboratories has required a review of all aspects of laboratory operations. The number of laboratory tests is influenced by the growing population, demographics and the increasing need for laboratory testing in modern medicine. Each of the variables, when looked at in detail, is very difficult to influence. One variable, however, does give some ability to enter into a dialogue with physicians and perhaps have an influence. Why do physicians order laboratory tests? How can the laboratory respond by providing excellent laboratory results in a timely manner, yet minimize the consistent increase in laboratory workload? These are the questions asked and discussed in this module.

developed by the

MODE group

Medical Occupational Distance Educators Group

At the completion of this course, the learner will be able to:

- List the many reasons that physicians order laboratory tests.
- Classify the reasons that physicians order laboratory tests.
- Describe the measures taken by the laboratory to determine the accuracy and precision of laboratory tests.
- Discuss how the laboratory evaluates a new test and what the inherent limitations are.
- Describe the probable reasons for the increase in laboratory workload in recent years.
- Discuss why the laboratory is interested in the reasons physicians order laboratory tests.
- Outline some of the studies published that investigated approaches made to influence physician test ordering.
- Discuss in detail how the laboratory can have an influence on physician ordering patterns.
- Describe the limitations of the 12-test chemistry profile.

Who will be your instructor?

John Chapman, FCSMLS, FIMLS, CLSLp(H)

Other course details:

- Work at your own pace - you set the schedule. Your studies are supported by the author/instructor, self-assessment exercise and your learning is evaluated by an invigilated quiz (you choose the place and time).
- **New!** You can choose whether to write a paper exam or online computer exam through E-Learning Society.
- Individuals registered in a self-paced course must complete the course within 12 months of registration. After 12 months the registration will expire. No refund will be provided for expired registrations.
- Course last reviewed/revised: June 2006

Course Fees

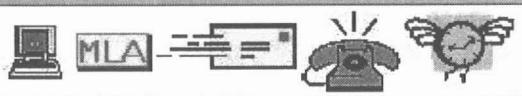
Members	$70
Non-Members	$100

This module is available on an ongoing basis.

Section G

Management

Management - *COMING SOON! Emotional Intelligence [4875]*	
Level: Advanced	**Credits:** TBA



The overall goal of Emotional Intelligence at Work is to assist the learner in exploring and understanding the concepts of Emotional Intelligence, with an emphasis on the impact of emotional intelligence on performance. The course will also provide insight into the link of emotional intelligence with some of the related CSMLS core competencies.

At the completion of this course, the learner will be able to:

- Describe Emotional Intelligence and how it differs from other forms of intelligence.
- Identify the skills of Emotional Intelligence.
- Describe the impact of Emotional Intelligence on individual and team performance, learning, coaching and business outcomes.
- Relate Emotional Intelligence skills with CSMLS competencies.

Who will be your instructor?

Patti Martin's business background includes human resources management and organizational development consulting with large corporations as well as career counseling and coaching. She is an experienced trainer and facilitator with a passion for learning and development. Patti has a degree in Psychology from the University of Western Ontario as well as certifications in Emotional Intelligence (Bar-ON EQi®), Effective Thinking™ and Career Counseling. As a life-long learner, she has also completed programs in leadership, change management and personal mastery. Patti is also the author/instructor of the CSMLS Performance Management course.

Course Prerequisites

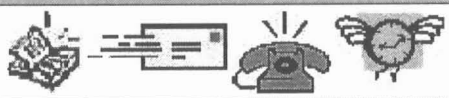
- For a successful learning experience, you MUST check the computer you will use!
- System Processor: Minimum: 800 Mhz
- System Ram: Minimum: 500 MB
- Screen Resolution: 1024 x 768
- Internet Connection: Minimum 56K, high-speed recommended
- Firewall: Access by http://els.csmls.org/ permitted
- Pop-ups: • allow pop ups from http://els.csmls.org/ Or • when you are going to work in E-Learning Society, turn off the pop-up blocker
- JavaScript is required and can be installed from http://www.java.com/en/download/
- Browser: A recent version of your internet browser, Internet Explorer preferred
- NOTE: THE CSMLS PROVIDES TECHNICAL SUPPORT FOR E-LEARNING SOCIETY ONLY. WE CANNOT PROVIDE TECHNICAL SUPPORT FOR PROBLEMS WITH YOUR COMPUTER
- We highly recommend that you familiarize yourself with E-Learning Society well before your course start date. There are free courses in "start e-learning" to help you get comfortable with the system.

Course Fees

Members	$
Non-Members	$

This module is available on an ongoing basis.

Management - *NEW - AVAILABLE NOW! Performance Management [4773]*	
Level: Advanced	**Credits:** 3.2 CPS/ART 48 PEP hours



The overall goal of Performance mangement is to increase the learner's awareness and understanding of the process of managing performance. The course serves to enhance the learner's confidence and skill in managing all elements of performance management and to ensure successful outcomes for both the individual employee and the organization.

At the completion of this course, the learner will be able to:

- Define performance goals and measure outcomes
- Provide effective coaching to improve performance
- Implement and document a progressive discipline process to ensure legal compliance
- Evaluate, communicate and document performance results

Who will be your instructor?

Patti Martin's business background includes human resources management and organizational development consulting with large corporations as well as career counseling and coaching. She is an experienced trainer and facilitator with a passion for learning and development. Patti has a degree in Psychology from the University of Western Ontario as well as certifications in Emotional Intelligence (Bar-ON EQi®), Effective Thinking™ and Career Counseling. As a life-long learner, she has also completed programs in leadership, change management and personal mastery.

Terry Chelich, Director of Laboratory Services, Calgary Health Region had this to say about Patti's course:

This has to be one of the best presented and written courses that I've ever evaluated. Should be mandatory for all MLT's - people receiving feedback learn as much as those responsible for Performance Management

Course Prerequisites

- There is no prerequisite learning for this course; however, because Turnitin.com is used for submitting assignments and emailing with your instructor, **access to a computer and the internet is required.**

Why do YOU want to use Turnitin.com?

- You will have access to your marked assignments and the feedback from your instructor in a much faster time – you won't have to depend on the postal system
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- Turnitin.com also allows you to email back and forth with your instructor, without displaying your personal email address. You can keep that private

Other course details:

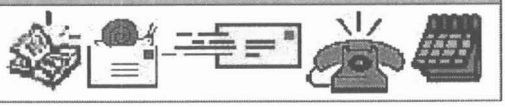
- Continuous registration
- Course takes four months to complete
- 45 hours of study
- Assistance from Patti is available via email and telephone
- Individuals registered in a self-paced course must complete the course within 12 months of registration. After 12 months the registration will expire. No refund will be provided for expired registrations.
- Course last reviewed/revised: 2007

Course Fees

Members	$290
Non-Members	$440

This module is available on an ongoing basis.

Management - *The Technologist and the Law [2603]*	
Level: Advanced	**Credits:** 2.8 CPS/ART 42 PEP hours



The increasing complexity of medical services in Canada has broadened the exposure of health care professionals to professional and personal liability. Learn how legal responibilities impact job performance in the laboratory with a better understanding of general principles and pertinent aspects of law. You will relate legal requirements to your institution's policies and procedures, identify situations within or associated with the laboratory and learn to deal with legal implications effectively. This latest revision includes issues concerning medical ethics and clinical laboratory practice.

At the completion of this course, the learner will be able to:

- Understand the general principles and pertinent aspects of the law that govern the practice of medical laboratory technology in the health care system
- Recognize the relationship between the legal requirements and institutional policies and procedures
- Identify situations in the laboratory, or associated with the laboratory, that may have legal implications and be able to deal with them effectively

Who will be your instructor?

Myrna Gunter, ART, will guide your learning and support your studies.

Other course details:

- Begins March and September
- Runs for three months
- Nine lessons are taught with notes
- You will be required to complete three assignments
- Assistance from Myrna is available via telephone and e-mail
- Course last reviewed/revised: August 2007

Course Fees

Members	$250
Non-Members	$375

Section I

Quality

Quality - *NEW - AVAILABLE MARCH 1, 2008! Quality Systems for the Clinical Laboratory: Part II (Planning/Design) [4669]*

Level: Advanced

Credits: 3.0 CPS/ART

45 PEP hours

This course includes the basic steps required to plan a formal quality system for a laboratory. The participants will:

• Consider the relative advantages and disadvantages of three quality system alternatives (ISO, CAP, CLSI)

• Assess the current state of their own laboratory's quality system with respect to the ten essential quality system components

• Prepare a customized quality system plan for their own laboratory

Completing this course will also provide the learner with the necessary pre-requisite for the third course in this series - Quality Systems for the Clinical Laboratory: Part III (Implementation)

At the completion of this course, the learner will be able to:

- Select the quality system (QS) model most suitable for the learner's own organization
- Identify managerial issues and potential barriers to success for implementation of a QS
- Conduct a QS gap analysis
- Prepare a quality system implementation plan

Who will be your instructor?

Sue Bradley, ART, B.Sc. (Biology), MBA, has worked as a bench technologist in both the public and private sectors; as a research and QC technologist for a biotechnology company; as a clinical supervisor in the special hematology department; and most recently as the Hematology Laboratory Scientist at the BC Biomedical Laboratories. Sue is currently self-employed as a laboratory consultant.

Course Prerequisites

- Quality Systems for the Clinical Laboratory: Part I is a pre-requisite for this course.

Access to a computer and the internet is required because Turnitin.com is used for submitting assignments, writing the examination and emailing with your instructor.

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- You will have access to your marked assignments and the feedback from your instructor in a much faster time – you won't have to depend on the postal system
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- You won't have to find stamps and envelopes to mail your assignments or make a trip to the mail box or post office!
- Turnitin.com also allows you to email back and forth with your instructor, without displaying your personal email address. You can keep that private.

Other course details:

- Continuous registration
- Approximately 45 hours to complete
- Four practice assignments
- Your learning will be evaluated by four assignments and an examination
- Examination must be written using Turnitin.com
- Assistance from Sue via email
- Individuals registered in a self-paced course must complete the course within 12 months of registration. After 12 months the registration will expire. No refund will be provided for expired registrations.
- Course last reviewed/revised: January 2008

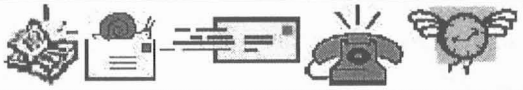
Course Fees

Members	$300
Non-Members	$450

This module is available on an ongoing basis.

Quality - *Quality Control - From Data to Decisions Part 1 Basic Concepts [4256]*

Level: Advanced	**Credits:** 1.0 CPS/ART 15 PEP hours



This three-part series on laboratory control enables laboratory professionals to look at the numerical data from their quality control charts and reports, make appropriate decisions and take the right actions. Part 1, Basic Concepts, reviews fundamental statistical data and enables you to interpret and apply this information as you examine QC points on quality control charts.

At the completion of this course, the learner will be able to:

- Understand why we perform laboratory quality control
- Describe how quality control relates to total quality management
- Describe key requirements of quality control material
- Understand fundamental terms
- Understand the relationship between Gaussian distribution and Levey-Jennings QC charts
- Analyze data on quality control charts
- Demonstrate an understanding of probability of error detection and false rejection
- Describe errors in patient's samples that will not be detected by routine quality control

Who will be your instructor?

Zoe Brooks is an experienced laboratory manager with an avid interest in statistical quality control and Total Quality Management. She specializes in software development and consulting in performance-driven quality control and activity based costing. Zoe has presented posters at several AACC conferences, published articles in MLO and the Canadian Society for Medical Laboratory Science (CSMLS) Journal and presented many seminars and workshops across Canada and the USA, and in Korea, Taiwan, China, Thailand, England and Wales. Zoe brings her expertise to you in this series of courses that feature printed materials and interactive CD's.

Other course details:

- Continuous registration
- Each part takes approximately four weeks to complete
- Self-assessment exercise plus examination for each part
- Assistance from Zoe is available via telephone and e-mail
- Individuals registered in a self-paced course must complete the course within 12 months of registration. After 12 months the registration will expire. No refund will be provided for expired registrations.
- Contact the CSMLS office if you wish to purchase the course in either of the following formats:
- Members: $175 (CD only)
- $225 (CD and print format)
- Non-member: $263 (CD only)
- $338 (CD and print format)
- Price listed in fee section is for print format only
- Course last reviewed/revised: October 2004

Course Fees

Members	$200
Non-Members	$300

This module is available on an ongoing basis.

Quality - *Quality Control - From Data to Decisions Part 2 Trouble Shooting [4257]*	
Level: Advanced	**Credits:** 1.0 CPS/ART 15 PEP hours

This new three-part series on laboratory control enables laboratory professionals to look at the numerical data from their quality control charts and reports, make appropriate decisions and take the right actions. In Part 2, Trouble Shooting, as you critically examine the pitfalls and problems associated with routine statistics, you will solve daily QC problems, interpret inter-laboratory comparison reports, and assess overall method performance.

At the completion of this course, the learner will be able to:

- Evaluate the validity of QC flags

- Relate rule violations on QC charts to random or systematic error
- Demonstrate an understanding of potential errors in calculations of the mean and SD
- Determine if the assigned mean and SD on a chart reflect actual method performance
- Evaluate the acceptability of changes in method accuracy or precision by comparing Total Error to Total Allowable Error
- Describe key features of intra-laboratory peer comparison statistics
- Use worksheets to systematically detect and resolve problems indicated by QC flags

Who will be your instructor?

Zoe Brooks is an experienced laboratory manager with an avid interest in statistical quality control and Total Quality Management. She specializes in software development and consulting in performance-driven quality control and activity based costing. Zoe has presented posters at several AACC conferences, published articles in MLO and the Canadian Society for Medical Laboratory Science (CSMLS) Journal and presented many seminars and workshops across Canada and the USA, and in Korea, Taiwan, China, Thailand, England and Wales. Zoe brings her expertise to you in this series of courses that feature printed materials and interactive CD's.

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- $338 (CD and print format)
- Price listed in fee section is for print format only
- Course last reviewed/revised: October 2004

Course Fees

Members	$200
Non-Members	$300

This module is available on an ongoing basis.

Quality - *Quality Control - From Data to Decisions Part 3 Designing QC Systems [4258]*

Level: Advanced

Credits: 1.5 CPS/ART

22.5 PEP hours

This new three-part series on laboratory control enables laboratory professionals to look at the numerical data from their quality control charts and reports, make appropriate decisions and take the right actions. Part 3, Designing QC Systems, explains the strengths and weaknesses of various QC rules and enables you to select the appropriate rules and maintain quality method performance.

At the completion of this course, the learner will be able to:

- Understand control target values and Total Allowable Error Limits (Tea) are established
- Use common quality control rules
- Understand the advantages of multi-rule algorithms
- Understand some potential problems with common quality control strategies
- Understand how Critical Systematic Error indicates method performance relative to quality goals
- Calculate Critical Systematic Error
- Select appropriate QC rules based on Critical Systematic Error and method stability
- Design appropriate quality control strategies using Quality Control Strategy Tables

Who will be your instructor?

Zoe Brooks is an experienced laboratory manager with an avid interest in statistical quality control and Total Quality Management. She specializes in software development and consulting in performance-driven quality control and activity based costing. Zoe has presented posters at several AACC conferences, published articles in MLO and the Canadian Society for Medical Laboratory Science (CSMLS) Journal and presented many seminars and workshops across Canada and the USA, and in Korea, Taiwan, China, Thailand, England and Wales. Zoe brings her expertise to you in this series of courses that feature printed materials and interactive CD's.

Other course details:

- Continuous registration
- Each part takes approximately four weeks to complete
- Self-assessment exercise plus examination for each part
- Assistance from Zoe is available via telephone and e-mail
- Individuals registered in a self-paced course must complete the course within 12 months of registration. After 12 months the registration will expire. No refund will be provided for expired registrations.
- Contact the CSMLS office if you wish to purchase the course in either of the following formats:
- Members: $175 (CD only)
- $225 (CD and print format)
- Non-member: $263 (CD only)
- $338 (CD and print format)
- Price listed in fee section is for print format only
- Course last reviewed/revised: October 2004

Course Fees

Members	$200
Non-Members	$300

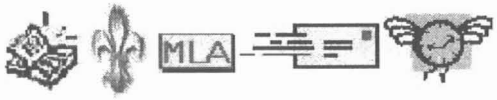
This module is available on an ongoing basis.

Quality - *Quality Systems for the Clinical Laboratory - Part I (Introduction) [4668]*

Level: Advanced

Credits: 3.0 CPS/ART

45 PEP hours



This course is an introduction to quality systems, with a particular focus on their application to medical laboratories within Canada. The course is divided into three modules:

1. Introduction to quality management 2. Essential components of a quality system 3. Quality standards, models, and programs.

Completion of this course will provide the learner with the skills and knowledge required to function within a laboratory quality system, as well as, the necessary prerequisite for the second course in this series – Quality Systems for the Clinical Laboratory: Part II (Planning and Design).

Who should take this course? MLT's and MLA's who want to learn more about quality systems and managers or potential managers who may be required to plan and/or implement a formal quality system (or components) in their clinical laboratory.

At the completion of this course, the learner will be able to:

- Discuss the relevance of a quality system to the laboratory
- Describe the essential components of a quality system
- Describe the quality standards, models, and programs available to Canadian medical laboratories

Who will be your instructor?

Sue Bradley, ART, B.Sc. (Biology), MBA, has worked as a bench technologist in both the public and private sectors; as a research and QC technologist for a biotechnology company; as a clinical supervisor in the special hematology department; and most recently as the Hematology Laboratory Scientist at the BC Biomedical Laboratories. Sue is currently self-employed as a laboratory consultant.

Course Prerequisites

- Basic knowledge of laboratory operations is assumed. No previous understanding of quality management is assumed or required; however, because Turnitin.com is used for submitting assignments, writing the examination and emailing with your instructor, **access to a computer and the internet is required.**

Why do YOU want to use Turnitin.com?

- You will have access to your marked assignments and the feedback from your instructor in a much faster time – you won't have to depend on the postal system
- You will have no trouble reading your feedback, and your instructor will have no trouble reading your assignments
- You won't have to find stamps and envelopes to mail your assignments or make a trip to the mail box or post office!
- Turnitin.com also allows you to email back and forth with your instructor, without displaying your personal email address. You can keep that private.

Other course details:

- Continuous registration
- Approximately 45 hours to complete
- Three practice assignments
- Your learning will be evaluated by three assignments and an examination
- Examination must be written using Turnitin.com
- Assistance from Sue via email
- Individuals registered in a self-paced course must complete the course within 12 months of registration. After 12 months the registration will expire. No refund will be provided for expired registrations.
- Course last reviewed/revised: March 2007

Course Fees

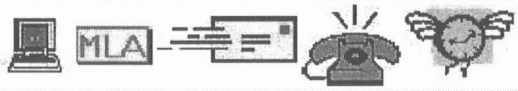
Members	$285
Non-Members	$430

This module is available on an ongoing basis.

Section O

Histotechnology

Histotechnology - *COMING SOON! Introduction and Overview of Anatomical Pathology [4903]*	
Level: Basic	**Credits:** TBA



To give students a basic and comprehensive understanding of the importance and value of what is done in each step of the care of a patient's tissue specimen from the moment it is collected, to the point where the results are released.

At the completion of this course, the learner will be able to:

- List and describe each step a patient's tissue follows from the point of collection, through all the steps required by and performed in the anatomic pathology department and ending with the result release and diagnosis of the patient.
- Describe the role and qualifications of each of the different personnel that may work in the world of anatomic pathology.
- Value and understand the importance of the work of anatomic pathology in the life of a patient.
- Use and apply the terminology commonly used in the anatomic pathology world.
- Recognize the steps that could be done incorrectly, resulting in erroneous results from anatomical pathology.

Who will be your instructor?

Eleanor Hooley, MLT

Course Prerequisites

- Training as an MLA, Autopsy Technician, MLT or Pathology Assistant. Prior knowledge specific to this field is not required, as this is an introductory course.

For a successful learning experience, you MUST check the computer you will use!

- System Processor: Minimum: 800 Mhz
- System Ram: Minimum: 500 MB
- Screen Resolution: 1024 x 768
- Internet Connection: Minimum 56K, high-speed recommended
- Firewall: Access by http://els.csmls.org/ permitted
- Pop-ups: • allow pop ups from http://els.csmls.org/ Or • when you are going to work in E-Learning Society, turn off the pop-up blocker
- JavaScript is required and can be installed from http://www.java.com/en/download/
- Browser: A recent version of your internet browser, Internet Explorer preferred
- NOTE: THE CSMLS PROVIDES TECHNICAL SUPPORT FOR E-LEARNING SOCIETY ONLY. WE CANNOT PROVIDE TECHNICAL SUPPORT FOR PROBLEMS WITH YOUR COMPUTER
- We highly recommend that you familiarize yourself with E-Learning Society well before your course start date. There are free courses in "start e-learning" to help you get comfortable with the system.

Other course details:

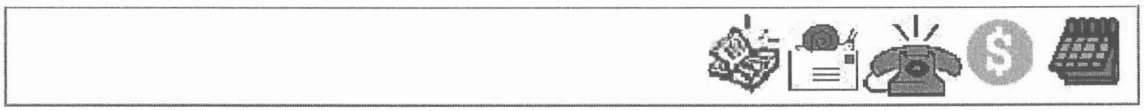
- Continuous registration
- Learner assessment includes assignments, participation in on-line forums and an examination
- Assistance from Eleanor is available via email and telephone
- Individuals registered in a self-paced course must complete the course within 12 months of registration. After 12 months the registration will expire. No refund will be provided for expired registrations.
- Course last reviewed/revised: 2008

Course Fees

Members	$TBA
Non-Members	$TBA

This module is available on an ongoing basis.

Histotechnology - *Histology I [2605]*	
Level: Advanced	**Credits:** 4.3 CPS/ART 93 PEP hours



Improve your understanding of the interactions that occur among tissues, fixatives and dyes and build your skills in assessing the outcomes of the work you do. You will study protein synthesis, tissues including connective and nervous, muscle, sensory organs and skin. Over 200 images on CD supplement the written material.

At the completion of this course, the learner will be able to:

- Understand cell and epithelium, soft connective tissues, nervous tissue, muscle, sensory organs, skin

Who will be your instructor?

Bryan Hewlett, ART, MLT, has spent over 45 years working in research and clinical anatomical pathology laboratories in both England and Canada. He was the histotechnology instructor at the Thunder Bay Institute of Medical Technology, a sessional lecturer in human histology at Lakehead University and has given many lectures, seminars and workshops at the provincial, national and international level. Bryan is currently a Consultant Technologist for the Quality Management Program - Laboratory Services of Ontario.

Norman Poch, MLT, has over 25 years experience as a histotechnologist, both as a charge technologist and instructor. Norm will be challenging the Pathologist's Assistant exam for the AAPA in October 2004.

Course Prerequisites

- Prerequisite for Histology II

Other course details:

- Begins October and March
- Three months in length
- Four assignments to be completed and an examination
- One textbook needed - Basic Histology, 11th ed., Junqueira & Carneiro
- Assistance from Bryan or Norm is available via telephone and e-mail
- PowerPoint is required to view images (contact the office for other options)
- Course last reviewed/revised: February 2001

Course Fees

Members	$325	**Required Materials** $76.95
Non-Members	$488	

Course has limited enrollment of 35 people

Histotechnology - *Histology II [2606]*	
Level: Advanced	**Credits:** 3.8 CPS/ART 81.5 PEP hours
	

Continue the work you began in Histology I, as you consider the cardiovascular, digestive, respiratory, urinary, male and female reproductive and endocrine systems. Anatomy, physiology and the effect of hormone and other secretions are discussed in terms of laboratory findings. You will continue to build your expertise as you examine the 160 images on CD that support your studies.

At the completion of this course, the learner will be able to:

- Understand the circulatory system, digestive system (alimentary canal), pancreas, liver and gall bladder, respiratory system, urinary system, female reproductive system, male reproductive system, endocrine system

Who will be your instructor?

Norman Poch, MLT, has over 25 years experience as a histotechnologist, both as a charge technologist and instructor. Norm will be challenging the Pathologist's Assistant exam for the AAPA in October 2004. ~Bryan Hewlett, ART, MLT, has spent over 45 years working in research and clinical anatomical pathology laboratories in both England and Canada. He has been teaching for most of those years. He was the histotechnology instructor at the Thunder Bay Institute of Medical Technology, a sessional lecturer in human histology at Lakehead University and has given many lectures, seminars and workshops at the provincial, national and international level. Bryan is currently a Consultant Technologist for the Quality Management Program - Laboratory Services of Ontario.

Course Prerequisites

- Histology I is a prerequisite for Histology II

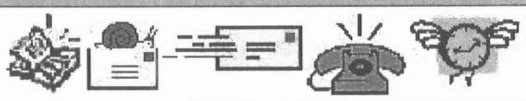
Other course details:

- Begins March and October
- Three months in length
- Four assignments to be completed and an exam
- One textbook needed - Basic Histology, 10th ed., Junqueira & Carneiro (The textbook for this course is the same as for Histology I and is not included in the fee for this course. If you need to purchase this textbook, please contact the office.)
- Assistance from Bryan is available via telephone and e-mail
- PowerPoint is required to view images (contact the office for other options)
- Course last reviewed/revised: February 2001

Course Fees

Members	$325
Non-Members	$488

Course has limited enrollment of 30 people

Histotechnology - *Paraffin Tissue Processing [9822]*	
Level: Basic	**Credits:** 0 CPS/ART 9 PEP hours
	

Meticulous embedding of tissues ensures sections are accurate representations and directly impacts the examination and interpretation of specimens. You will review the basics on the theory and mechanisms of paraffin tissue processing, including dehydration, clearing, infiltration, decalcification and general processing. Improve your problem solving skills as you learn to detect and correct processing errors and deal with disposal of clearing agents and hazards of clearing agents.

developed by the MODE group
Medical Occupational Distance Educators Group

Who will be your instructor?

Masaye Tanaka, MLT, ART, BSc, MEd

Other course details:

- Work at your own pace - you set the schedule. Your studies are supported by the author/instructor, self-assessment exercise and your learning is evaluated by an invigilated quiz (you choose the place and time).
- Individuals registered in a self-paced course must complete the course within 12 months of registration. After 12 months the registration will expire. No refund will be provided for expired registrations.
- Course last reviewed/revised: September 1998

Course Fees

Members	$70
Non-Members	$100

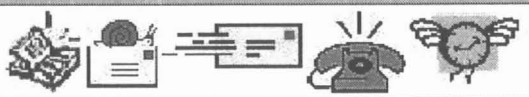
This module is available on an ongoing basis.

Histotechnology - *The H and E Stain [9816]*

Level: Basic

Credits: 0 CPS/ART

8 PEP hours



The hematoxylin and eosin stain is the most universally utilized staining technique in the histopathology laboratory. Reinforce your understanding by examining this stain in detail in terms of theory, practice, category differentiation and trouble-shooting "when things go wrong".

developed by the MODE group Medical Occupational Distance Educators Group

Who will be your instructor?

Masaye Tanaka, MLT, ART, BSc, MEd

Other course details:

- Work at your own pace - you set the schedule. Your studies are supported by the author/instructor, self-assessment exercise and your learning is evaluated by an invigilated quiz (you choose the place and time).
- Individuals registered in a self-paced course must complete the course within 12 months of registration. After 12 months the registration will expire. No refund will be provided for expired registrations.
- Course last reviewed/revised: July 1998

Course Fees

Members	$60
Non-Members	$90

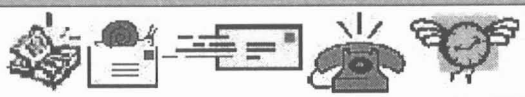
This module is available on an ongoing basis.

Histotechnology - *Theory and Mechanisms of Staining [9815]*

Level: Basic

Credits: 0 CPS/ART

11 PEP hours



Examination of the transparent constituent parts of cells and intercellular material are directly affected by proper staining techniques. Review the theory and mechanisms of staining, dye classification and tissue demonstration methods and improve your skills and the quality of prepared material.

developed by the MODE group Medical Occupational Distance Educators Group

At the completion of this course, the learner will be able to:

- Define the term resonance system in relation to dye chemistry.
- Define chromophore (quinoid ring, azo coupling, nitro grouping), chromogen and auxochrome (hydroxyl, amine, carboxyl, sulphonic) in relation to dye structure and classification
- Relate acid, basic and neutral dyes to their staining properties.
- Discuss physical theories of staining: selective solubility, adsorption, porosity.
- Describe chemical theories of staining: salt linkage, hydrogen bonding, metachromasia leukostaining, metallic impregnation, histochemical reactions.

- Describe proper storage of dyes and indicate criteria.
- Define colour index number.
- Differentiate between progressive and regressive staining and state advantages and disadvantages of each.
- Classify dyes according to origin and examples of each.
- Explain the principle and use of direct and indirect staining.
- Define and describe use of accelerators and accentuators.
- State principle and application of argyrophil and argentaffin reactions.
- Name three (3) chromophoric groups found in many commonly used stains, show the basic chemical structure and name at least one dye that contains the group.
- Define basophilic tissue and acidophilic tissue
- Define mordant, lake, accentuator, accelerator, metachromasia, leuco compound, chromotrope and orthochromasia

Who will be your instructor?

Masaye Tanaka, MLT, ART, BSc, MEd

Other course details:

- Work at your own pace - you set the schedule. Your studies are supported by the author/instructor, self-assessment exercise and your learning is evaluated by an invigilated quiz (you choose the place and time).
- Individuals registered in a self-paced course must complete the course within 12 months of registration. After 12 months the registration will expire. No refund will be provided for expired registrations.
- Course last reviewed/revised: July 1998

Course Fees

Members	$70
Non-Members	$100

This module is available on an ongoing basis.