

P.A.C.E.[®] CEU Guidelines

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The SAFMLS organization provides continuing education units (CEUs) to all annual meeting attendees through the American Society for Clinical Laboratory Scientists (ASCLS). The American Society for Clinical Pathology Board of Certification offers a Certification Maintenance Program for laboratory professionals, which requires 36 points/CEUs of documented continuing competency activities every three years. Your annual SAFMLS meeting provides the ability for you to earn CEUs through Professional Acknowledgment for Continuing Education (P.A.C.E.[®]), and certified by ASCLS. P.A.C.E.[®] Continuing Education Contact Hours also satisfy the continuing education requirements for federal and state licensure, local employers, and regulatory agency recertification.

ATTENDEES

It is the responsibility of each attendee to ensure they SIGNS IN on the attendance form prior to the start of the briefing for EACH workshop and short topic, as well as the Opening Ceremony_Lecture. If you do not legibly sign the attendance roster prior to the start of the lecture you cannot obtain CEU credit hours. CEU credit hours must be verifiable by ASCLS through signatures on attendance logs. You also rate whether the learning objectives were met via your feedback following the briefing.

PRESENTERS

It is the responsibility of each presenter to write learning objectives and adhere to all requirements for the award of P.A.C.E.[®] Continuing Education Unit (CEU) hours to session attendees. To meet P.A.C.E.[®] requirements, each workshop and short topic presented must:

- be a structured learning experience
- have a topic which appears in the American Society of Clinical Laboratory Scientist (ASCLS) Body of Knowledge or relates to clinical laboratory science
- have written measurable learning objectives (see below), **stated in terms of what the participant will be able to do at the conclusion of the session**; objectives are to correlate with the Level of Instruction (see below)
- have qualified faculty with the background and experience necessary to teach the subject
- include a method of evaluation of the program by participants
- have a set time schedule and be at least 50 minutes in length for the first hour of instruction

BOTTOM LINE: Presenters for workshops, short topics, and opening ceremonies must submit curriculum vitae, abstract, and *measurable* learning objectives for the topic being presented. The abstract should preferably be no more than six sentences in length, and learning objectives must closely follow the guidelines set forth by P.A.C.E.[®] and ASCLS. ***Please pay special attention to the instructions below concerning the proper way to write a measurable learning objective. In the past, we have had workshops disapproved based on improperly written learning objectives.***

SAMPLE ABSTRACT

LABORATORY BIODEFENSE

The USAF mission in biodefense supports both community response through the Laboratory Response Network (LRN) and military installation response through the Homeland Defense Laboratory Response Team (HLD LRT). In this workshop, you will understand the similarities and differences of these two functions. You will learn techniques and procedures used in operating both response capabilities. You will gain knowledge of biological threat agents and determine their diagnostic limitations. Finally, you will be acquainted with the process of technology modernization and glean insight into future efforts to deploy and implement biodefense competence.

GUIDELINES

Measurable learning objectives have four main parts:

- Level of Instruction for the Audience (see below): for whom is the program intended?
- Actions: what should the participants be able to do as a result of program attendance?
- Conditions: what initial criteria are the participants given?
- Degree of learning: how well are the participants expected to be able to perform the action(s) learned at the end of the program?

Steps for developing measurable learning objectives:

Step 1: Determine **level of audience**:

Basic—entry level; no prior knowledge of the subject necessary

Intermediate—refresher course; some basic knowledge required; is written for the staff technologist with several years of experience

Advanced—highly technical; is written for those with current skills/knowledge and at least five years of experience in a specialty area

Step 2: Identify what your **audience** should be able to do after the program.

Step 3: **Write** specific measurable learning objectives in terms of the four major parts (described above) of a measurable learning objective - actions, conditions, degree - and correlate these with the level of instruction appropriate for the intended audience. See listing of verbs below to assist in writing objectives.

Step 4: **Evaluate** whether the program instruction satisfies the objectives.

Avoid non-measurable verbs: amplify, appreciate, be acquainted with, be aware of, be (come) familiar with, explore, gain insight, improve, increase, know, learn, realize, and understand. Below are verbs that will help in writing good learning objectives.

Knowledge and Comprehension encompass cognitive processes of remembering or explaining. Application and Analysis are at a higher level and involve using knowledge to find new solutions, or in breaking a whole into component parts. Synthesis and Evaluation are problem solving cognitive processes, usually involving the creation of a new whole, or ability to judge the value of something.

<u>KNOWLEDGE</u>	<u>COMPREHENSION</u>	<u>APPLICATION</u>	<u>ANALYSIS</u>	<u>SYNTHESIS</u>	<u>EVALUATION</u>
Cite	Arrange	Adapt	Analyze	Arrange	Appraise
Choose	Associate	Apply	Appraise	Assemble	Approve
Define	Clarify	Catalogue	Audit	Build	Assess
Label	Classify	Chart	Break down	Combine	Choose
List	Convert	Compute	Calculate	Compile	Conclude
Locate	Describe	Consolidate	Categorize	Compose	Confirm
Match	Diagram	Demonstrate	Certify	Conceive	Criticize
Name	Draw	Develop	Compare	Construct	Critique
Recall	Discuss	Employ	Contrast	Create	Diagnose
Recognize	Estimate	Extend	Correlate	Design	Evaluate
Record	Explain	Extrapolate	Criticize	Devise	Judge
Repeat	Express	Generalize	Deduce	Discover	Justify
Select	Identify	Illustrate	Defend	Draft	Prioritize
State	Locate	Infer	Detect	Formulate	Prove
Write	Outline	Interpolate	Diagram	Generate	Rank
	Paraphrase	Interpret	Differentiate	Integrate	Rate
	Report	Manipulate	Discriminate	Make	Recommend
	Restate	Modify	Distinguish	Manage	Research
	Review	Order	Examine	Organize	Resolve
	Sort	Predict	Infer	Plan	Revise
	Summarize	Prepare	Inspect	Predict	Rule on

Transfer	Produce	Investigate	Prepare	Select
Translate	Relate	Question	Propose	Support
	Sketch	Reason	Reorder	Validate
	Submit	Separate	Reorganize	
	Tabulate	Solve	Set up	
	Transcribe	Survey	Structure	
	Use	Test	Synthesize	
	Utilize	Uncover		
		Verify		

The affective domain is concerned with changes (growth) in interests, attitudes, and values. There are five major classes based on level of involvement.

<u>RECEIVING</u>	<u>RESPONDING</u>	<u>VALUING</u>	<u>ORGANIZATION</u>	<u>CHARACTERIZATION BY A VALUE OR VALUE COMPLEX</u>
Accept	Agree	Adopt	Anticipate	Act
Acknowledge	Allow	Aid	Collaborate	Administer
Attend (to)	Answer	Care (for)	Confer	Advance
Follow	Ask	Complete	Consider	Advocate
Listen	Assist	Compliment	Consult	Aid
Meet	Attempt	Contribute	Coordinate	Challenge
Observe	Choose	Delay	Design	Change
Receive	Communicate	Encourage	Direct	Commit (to)
	Comply	Endorse	Establish	Counsel
	Conform	Enforce	Facilitate	Criticize
	Cooperate	Evaluate	Follow through	Debate
	Demonstrate	Expedite	Investigate	Defend
	Describe	Foster	Judge	Disagree
	Discuss	Guide	Lead	Dispute
	Display	Initiate	Manage	Empathize
	Exhibit	Interact	Modify	Endeavor
	Follow	Join	Organize	Enhance
	Give	Justify	Oversee	Excuse
	Help	Maintain	Plan	Forgive
	Identify	Monitor	Qualify	Influence
	Locate	Praise	Recommend	Motivate
	Notify	Preserve	Revise	Negotiate
	Obey	Propose	Simplify	Object
	Offer	Query	Specify	Persevere
	Participate (in)	React	Submit	Persist
	Practice	Respect	Synthesize	Praise
	Present	Seek	Test	Profess
	Read	Share	Vary	Promote
	Relay	Study	Weigh	Promulgate
	Reply	Subscribe		Question
	Report	Suggest		Reject
	Respond	Support		Resolve
	Select	Thank		Seek
	Try	Uphold		Serve
				Solve
				Strive
				Tolerate
				Volunteer (for)

THANK YOU to all who voluntarily prepare and present workshops, short topics, and posters at our annual meetings; together we strive for laboratory excellence.